# Table of Contents

2020 MS Strength & Conditioning

# Major-ED-PE-Strength and Conditioning (MS) 2020

Completed

**1** GOALS **3** OUTCOMES **10** MEASURES **10** TARGETS **10** FINDINGS **4** ATTACHMENTS

Institutional Mission

Arkansas Tech University is dedicated to student success, access, and excellence as a responsive campus community providing opportunities for progressive intellectual development and civic engagement. Embracing and expanding upon its technological traditions, Tech inspires and empowers members of the community to achieve their goals while striving for the betterment of Arkansas, the nation, and the world.

Program Mission

| Program Learning Outcomes | | Expectations/Target for this Outcome | Findings/Results |
|---|---|---|---|
| 1 **Calendar Year Assessment Information**<br>2020-2021<br>**NOTE** Program review was conducted this year. The self-study, external reviewers' report and institutional response are found in the Project Attachments at the bottom of this site. APPROVALS & INFORMATION BLOCK (**NOTE**. This block provides a brief description of actions taking place (or planned to take place) during the current assessment cycle. If there are more (or less) outcomes assessed, please alter as necessary. Additional comments are also welcome.) Point of Contact for this year's assessment (add additional names as needed): 1) Gina Kraft 2) APPROVALS _____ Department Head Approval: Date: Dean Approval: Date: Office of Assessment Approval: C. Austin Date: 8.27.21 _____ Program Level Context: ADHE Program Review Year - Completed Student Learning Outcomes Assessed during Calendar Year 2020 (Add more as necessary): Outcome 1: All examined Curriculum Committee Proposals or Changes (erase choice not used): N Assessment Data Used as Support for Change: (give Outcome #) Is Status of Project Noted in Title Bar Current? (erase choice not used): Y Change status in title bar above Are All Attachments Noted in Assessment Plan Added Below? (erase choice not used): Y _____ Additional Comments: | | | |

| Program Learning Outcomes | | Expectations/Target for this Outcome | Findings/Results |
|---|---|---|---|
| Outcome has action plan<br>1.1<br>Scientific knowledge<br>Students will demonstrate the necessary scientific knowledge to be effective strength coaches.<br>ACTION PLAN<br>Things to accomplish in 2020<br>DUE<br>no due date set | 1.1.1<br>Diet Analysis Assignment (SCS 6063)<br>Diet analysis assignment completed midway during the semester in SCS 6063 Trends in Sports Nutrition and Metabolism. | 1.1.1.1 Not Met<br>80% or better<br>All students will obtain 80% or better on this assignment. | Two of the 9 students earned 90% or higher. However, 6 students were below 80%, making the class average 75.97%.<br>REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS<br>Better clarification of the assignment in the syllabus and in class may be necessary in order for all students to meet the expectations. The syllabus contains all of the important details, but may not emphasize them enough for all students to realize the importance of all aspects of the assignment.<br>Another challenge is the diet analysis tool selected by the students. Not all students chose tools that provided reports with enough detail for this graduate level assignment. Better guidance in terms of tools may be needed. |
| | 1.1.2<br>Lab Report (PE 6033)<br>Lab report from PE 6033 Exercise Physiology. This may be completed individually or as a group. | 1.1.2.1 Met<br>80% or better<br>All students will obtain 80% or better on this assignment, regardless of whether it is completed individually or as a group. | The average student performance was 85.6%. All students were above 80%.<br>REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS |

| Program Learning Outcomes | | Expectations/Target for this Outcome | Findings/Results |
|---|---|---|---|
| | 1.1.3<br>Lab Report (PE 6053)<br><br>Lab report from PE 6053 Biomechanics. | 1.1.3.1 Partially Met<br>80% or better<br><br>All students will obtain 80% or better on this assignment. | Grade Range: 75 - 89 Mean Grade: 82 +/- 4.9<br><br>REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS<br><br>Some students needed improvement in was connecting the results to the why they occurred and application. Better clarification of expectations should assist in better attainment. |
| | 1.1.4<br>Assignment from PE 6043<br><br>Select an assignment from PE 6043 Motor Learning to be used for assessment. | 1.1.4.1 Met<br>80% or better<br><br>All students will obtain 80% or better on this assignment. | This semester, the Culminating Project assignment was selected. No students scored below 80%. The class average was 91.2% with a range of 84-96%.<br><br>REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS |
| | 1.1.5<br>Final Presentation (PE 6083)<br><br>This is the final project presentation for PE 6083 Research Design and Statistics in Physical Education. This takes place at the end of the semester. | 1.1.5.1 Exceeded<br>80% or better<br><br>All students will obtain 80% or better on this assignment. | All students scored above 90% for this assignment, with the class average being 95.1%.<br><br>REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS<br><br>I do not have a presentation rubric developed. I need to develop a rubric before I teach the class the next time. |

| Program Learning Outcomes | | Expectations/Target for this Outcome | Findings/Results |
|---|---|---|---|
| 1.2<br>Practical knowledge and skills<br>Students will demonstrate the practical knowledge & skills to be effective strength coaches. | 1.2.1<br>52-week Annual S&C Planning Presentation (SCS 6033)<br><br>This is the 52-week annual S&C planning presentation for SCS 6033 Strength and Conditioning Program Design & Development. | 1.2.1.1 Met<br>80% or better<br>All students will obtain 80% or better on this assignment. | The average student performance was 92.5% with a range of 90-95%.

<br>REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS |
| | 1.2.2<br>Case Study Based Final Exam (SCS 6013)<br><br>This is a case study based final exam for SCS 6013 Measurement and Evaluation in Strength and Conditioning. | 1.2.2.1 Partially Met<br>80% or better<br>All students will obtain 80% or better on this assignment. | The average performance was 86.1% with a range of 71.1% to 94.8%. Two students scored below the 80% mark with one at a71.1% and one at 79.3%.<br>REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS<br><br>I need to evaluate whether or not students were low performers because they made poor decisions on the exam or because they did not remember the details of protocols. Decision making and critical thinking will need to be addressed. |
| | 1.2.3<br>Programming Exam and Hands-on Coaching (SCS 6043) | 1.2.3.1 Partially Met<br>80% or better<br>All students will obtain 80% or better on this assignment. | The results of the 2 assignments are below:

Hands-on Coaching: Mean= 93; Max = 96; Min = 90
Final exam: Mean = 73; Max = 90; Min = 57 (6 below 80)


 |

| Program Learning Outcomes | | Expectations/Target for this Outcome | Findings/Results |
|---|---|---|---|
| | This is the programming exam and hands-on coaching experience in SCS 6043 Techniques for Development of Hypertrophy, Strength & Power. | | REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS<br><br>This course is usually face to face but was online due to COVID-19. This likely impacted student performance on these assignments. |
| | 1.2.4<br>Programming Exam and Hands-on Coaching (SCS 6053)<br><br>This is the programming exam and hands-on coaching experience in SCS 6053 Techniques for Development of Speed, Agility, Reaction Time & Endurance. | 1.2.4.1 Partially Met<br>80% or better<br>All students will obtain 80% or better on this assignment. | The results of the 2 assignments are below: Hands-on Coaching: Mean= 93; Max = 96; Min = 88
Final exam: Mean = 70; Max = 90; Min = 56 (7 below 80)
<br>REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS<br><br>This course is usually face to face but was online due to COVID-19. This likely impacted student performance on these assignments. |
| 1.3<br>Combined<br>Students will demonstrate integrated scientific knowledge & practical knowledge / skills in a successful research or creative project or internship. | 1.3.1<br>Final Program Project (SCS 6103)<br><br>This is the final project for the program. It is a pass/fail | 1.3.1.1 Met<br>100% pass<br>All students will pass the final project. | Spring - 5 students took and passed this class. Fall - 1 student took and passed the Professional Project class.<br>REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS |

| Program Learning Outcomes | | Expectations/Target for this Outcome | Findings/Results |
|---|---|---|---|
| | project and takes place in SCS 6103 Professional Project | | |

Project Attachments (4)

| Attachments | File Size |
|---|---|
| Academic Program Review External Reviewers Report Response (002).docx | 33KB |
| Arkansas Tech Review- final (1).pdf | 267KB |
| SCS Program Review 2020-21.pdf | 6MB |

# Academic Program Review External Reviewers Report Template

## I.Response to the External Reviewers' Recommendations

| Recommendations from External Reviewers | Response |
|---|---|
| **I.Review of Program Goals, Objectives and Activities** | |
| **B.How are the faculty and students accomplishing the program's goals and objectives?** | |
| The pass rate for ATU students taking the CSCS exam would be helpful, but that is not yet available. The program should solicit the help of the NSCA in tracking ATU students that take the CSCS exam. | Agree. This would be helpful information to have. |
| **C.Are program exit requirements appropriate?** | |
| The program may consider utilizing LinkedIn groups or something similar to keep track of alumni and therefore assess the program's long-term impact (including exit requirements) based on alumni feedback. | Agree. Keeping track of alumni in this way would help evaluate the degree effectiveness in a more long-term manner. |
| **D.Does the program contain evidence of good breath/focus and currency, including consistency with good practice?** | |
| The program may consider additional content related to military/first responder strength & conditioning. | Agree. This is worth considering and determining options for reaching out to these groups locally. |
| **F.Does the program promote and support interdisciplinary initiatives?** | |
| While there are some interdisciplinary opportunities, this could be a focus for the program moving forward in engaging campus and the region. In particular, strength & conditioning professionals increasingly serve on interdisciplinary teams that might include Registered Dietitians, medical professionals, mental performance professionals, and more. | Agree. Interdisciplinary opportunities are going to be of greater importance to students in the future. |
| **G.Does the program provide respect and understanding for cultural diversity as evidenced in the curriculum, in program activities, in assignment of program responsibly and duties; in honors, awards and scholarship recognition; in recruitment?** | |
| Cultural diversity is provided in the program through assignments and through specific courses. Of note, nutrition offers a unit on gender and age that specifically addresses diversity, and the entire current issues class covers a wide range of topics, including diversity. The program can include recent hires in the department to diversify its faculty and can prioritize further diversity when current financial strain and hiring challenges subside. The program could benefit from being more specific regarding cultural diversity in its other courses, specifically in assignment descriptions or syllabi outlines. During the live portion of the review, the reviewers discussed | Agree. |

recruitment strategies that could increase the cultural diversity of the students enrolled.

**IV.Review of Program Faculty**

**B.Are the faculty orientation and faculty evaluation processes appropriate?**

Increased effort should be made to provide comprehensive evaluations of teaching effectiveness in higher education. Many programs rely disproportionally on student evaluations of teaching which are wrought with shortcomings. Faculty evaluation processes at ATU relies heavily on student evaluations. However, the departmental chairperson also reviews faculty in the classroom and online (viewing materials and class shells). Given that there are more than student evaluations involved in faculty evaluation, this is appropriate and consistent with best practices.

Other forms of peer review in teaching may help to reduce the burden on the department chair.

Agree. Student evaluations are a weak form of teaching evaluation. The department should address this.

**C.Is the faculty workload in keeping with best practices?**

Faculty workload for similar programs in the US varies considerably based on research resources, research expectations and differentiated staffing. Faculty workload in the program is demanding on the core graduate faculty given that all are currently teaching overloads. Without a course load that allows for research time, the scholarly capabilities of faculty could be negatively impacted. The fact that the faculty are still active in publishing and presenting with course overloads to serve the students is impressive but not sustainable. Evidence-led professions like strength & conditioning benefit greatly when educators are involved in the process of generating new evidence.

Agree. But know that workloads are not likely to change in light of the current situation and the retirement (and inability to rehire) a faculty member in the department.

**V.Review of Program Resources**

**A.Is there an appropriate level of institutional support for program operation?**

The dean, chairperson, and the general faculty are all in support of the program and would like to see the program grow to meet its potential. However, without creativity from the current faculty, space and equipment to run the program would be lacking. For example, an unused racquetball court was recently outfitted with personal equipment from a faculty member to create a lab space for the program. Without personal equipment, this space would not be utilized, and students would be lacking experiences. Additionally, without oversight of the TechFit space, there would not be opportunities for students to gain additional hands-on experiences.

It is also unclear how equipment maintenance and replacement will be funded. There are several grant and other monetary supports from the college, but many of these grants are small in dollar amount and are not sufficient to provide some of the more advanced equipment needed to keep the program relevant long term.

Agree. The program and HPE department need to be forward thinking in finding ways to maintain and replace equipment.

It is important to examine sustainable funding patterns for the foreseeable future to make sure that the institutional support is sufficient.

**B.Are faculty, library, professional development and other program resources sufficient?**

While professional development funds are available, there has been a 50% decrease in funding, which can make keeping professional certifications and credentials current a challenge. While the COVID-19 pandemic has played a role nationally on college and university funding, temporary reductions to whether the financial challenges need to be restored to keep faculty sustained in their professional development. There are increasing opportunities for remote faculty development, such as online conferences and facultyfocus.com. However, these types of activities are still costly and do not afford the ability to recruit students and faculty to the program.

Agree.

**VI.Review of Program Effectiveness**

**B.Indicate the program areas in need of improvement within the next 12 months; and over the next 2-5 years.**

Program areas of improvement within the next 12 months:
1) Suggest changing verbiage to consistently be "strength & conditioning" in all program-related documents (some instances stated "strength coaches". Additional faculty cooperation may be solicited to increase consistency across course syllabi and related documents.
2) Targeted marketing assistance from the ATU marketing department, alumni relations, and the greater ATU community.
3) Create a matrix of CSCS competencies and matching curriculum components for organization and easier assessment.
4) Add objectives related to evidence-led practice in strength & conditioning.
5) Taking the three program goals for assessment purposes and identifying key competencies for each goal to streamline assessment and make a robust and consistent assessment plan.
6) Meeting with key personnel at ATU from the Dean's Office to President's Cabinet to enhance understanding of the program and what strength & conditioning is as a field to advocate for resources.

1) Agree. Consistency in language is important. Ensuring that language is inclusive in the field is critical.
2) Agree. Unsure how to obtain this. NSCA-TSAC, CSCCa-SCCC, NASM-PES, NCSF-CSC, and ISSA-SCC
3) Agree. This would be helpful. The assessment plan is new and needs more work. This is an appropriate way to develop it. However, we may not want to only focus on the NSCA's CSCS exam. Others to consider include:
4) Agree. This will ensure that we are staying current with the field. However, these may need to be course objectives rather than program objectives.
5) Agree. This relates to number 3.
6) Agree. However, we are unsure how this will be received.

Program areas of improvement within the next 2-5 years:
1) Work with alumni association or other entity to track graduates for marketing purposes and to keep records of where students are working.
2) Create separate research methods and statistics courses
3) Examine a hybrid option and a residential option to enhance accessibility of the program beyond the Russellville, AR region and reach the surrounding states.

1) Agree. Records related to alumni are important and have been difficult to maintain.
2) Unsure. The Graduate Curriculum Committee will need to discuss the efficacy of this, especially as the University is pushing to combine Research classes across campus.
3) Agree. We are already beginning to do this and feel it is important.
4) Agree. We need to brainstorm ways to do this that are sustainable.

4) Increase funding to make self-sustaining lab spaces that are not reliant on personal equipment of faculty or staff.

**C.Indicate areas for program development based on market/industry demands that have not been identified by the institution.**

The program has indicated evaluating additional tracks and options for the program, but these may not be needed. Areas for program development based upon market/ industry demands that have not been identified by the institution include establishing relationships with community and recreation centers locally, tactical and first responders, and with hospitals or clinics. These areas are increasing in need of knowledgeable strength & conditioning practitioners that the Strength & Conditioning Studies program can address in the curriculum beyond athletes.

Unsure. The additional tracks may still be a cost-effective way to grow the program, especially if no additional classes are needed to add them because of collaboration with other departments. However, we probably should determine if relationships with tactical areas are viable as an addition to the program.

## I. Actions Taken in Response to the External Reviewers' Recommendations

In this section, please describe the actions that will be taken as a result of the review; if any based on the recommendation from the external reviewers; note when the action will be completed and who is responsible for seeing that it is completed; and finally, list any resources that will be used to complete the action. Please add lines to the table as necessary.

| Recommendation | Action | Timing & Responsible Person/Group | Resources |
|---|---|---|---|
| **I.Review of Program Goals, Objectives and Activities**<br>**B.How are the faculty and students accomplishing the program's goals and objectives?** | | | |
| The pass rate for ATU students taking the CSCS exam would be helpful, but that is not yet available. The program should solicit the help of the NSCA in tracking ATU students that take the CSCS exam. | Contact the NSCA to request data.<br><br>Communicate the ERP discount to students. | By September 1, 2021 – Program Director<br><br>Periodically throughout the academic year – Program Director and faculty | NSCA |
| **C.Are program exit requirements appropriate?** | | | |
| The program may consider utilizing LinkedIn groups or something similar to keep track of alumni and therefore assess the program's long-term impact (including exit requirements) based on alumni feedback. | Create a LinkedIn Group for SCS graduates.<br><br>Communicate to current students that we would like them to join.<br><br>Reach out to alumni (those I can) to include them. See if the Alumni Association will help with this. | Before the beginning of the Fall 2021 semester – Program Director<br><br>Periodically. Include as part of the SCS 6103 Professional Project syllabus – Program Director<br><br>By the end of the Fall 2021 semester – Program Director | LinkedIn<br><br>Alumni Association |
| **D.Does the program contain evidence of good breath/focus and currency, including consistency with good practice?** | | | |
| The program may consider additional | Graduate Curriculum Committee will meet to | Initial meeting Fall 2021 – Program Director | Graduate Curriculum Committee |

| Recommendation | Action | Timing & Responsible Person/Group | Resources |
|---|---|---|---|
| content related to military/first responder strength & conditioning. | discuss options and how to proceed. | | Local Fire/Police/First Responder programs. |
| **F.Does the program promote and support interdisciplinary initiatives?** | | | |
| While there are some interdisciplinary opportunities, this could be a focus for the program moving forward in engaging campus and the region. In particular, strength & conditioning professionals increasingly serve on interdisciplinary teams that might include Registered Dietitians, medical professionals, mental performance professionals, and more. | Graduate Curriculum Committee will meet to discuss options and how to proceed. | Initial meeting Fall 2021 – Program Director | Graduate Curriculum Committee<br>Other academic departments on campus (e.g. Psychology, Nursing, Hospitality) |
| **G.Does the program provide respect and understanding for cultural diversity as evidenced in the curriculum, in program activities, in assignment of program responsibly and duties; in honors, awards and scholarship recognition; in recruitment?** | | | |
| Cultural diversity is provided in the program through assignments and through specific courses. Of note, nutrition offers a unit on gender and age that specifically addresses diversity, and the entire current issues class covers a wide range of topics, including diversity. The program can include recent hires in the department to diversify its faculty and can prioritize further diversity when current financial strain | None, at this time.<br><br>For next hiring phase, be more aware of this. | Unknown timing – Program Director in conjunction with HPE department | |

| Recommendation | Action | Timing & Responsible Person/Group | Resources |
|---|---|---|---|
| and hiring challenges subside.<br>The program could benefit from being more specific regarding cultural diversity in its other courses, specifically in assignment descriptions or syllabi outlines. During the live portion of the review, the reviewers discussed recruitment strategies that could increase the cultural diversity of the students enrolled. | | | |
| **IV.Review of Program Faculty**<br>**B.Are the faculty orientation and faculty evaluation processes appropriate?**<br>Increased effort should be made to provide comprehensive evaluations of teaching effectiveness in higher education. Many programs rely disproportionally on student evaluations of teaching which are wrought with shortcomings. Faculty evaluation processes at ATU relies heavily on student evaluations. However, the departmental chairperson also reviews faculty in the classroom and online (viewing materials and class shells). Given that there are more than student evaluations involved in faculty evaluation, this is appropriate and consistent with best practices.<br>Other forms of peer review in teaching may help to reduce the burden on the department chair. | The Program Director will discuss this with the Department Chair and try to bring this up at an upcoming department meeting. This is an issue for the entire HPE department, initially. If the department chooses not to address this issue, the SCS faculty and the Graduate Curriculum Committee may need to address this separately. | By September 1, 2021 – Program Director will meet with Department Chair to begin the process.<br><br>If the department fails to address during the 2021-2022 academic year, the SCS faculty and the Graduate Curriculum Committee will address at the beginning of the 2022-2023 academic year. | Faculty Handbook |
| **C.Is the faculty workload in keeping with best practices?**<br>Faculty workload for similar programs in the US varies considerably | The Program Director will meet with the | By September 1, 2021 – Program Director | |

| Recommendation | Action | Timing & Responsible Person/Group | Resources |
|---|---|---|---|
| based on research resources, research expectations and differentiated staffing. Faculty workload in the program is demanding on the core graduate faculty given that all are currently teaching overloads. Without a course load that allows for research time, the scholarly capabilities of faculty could be negatively impacted. The fact that the faculty are still active in publishing and presenting with course overloads to serve the students is impressive but not sustainable. Evidence-led professions like strength & conditioning benefit greatly when educators are involved in the process of generating new evidence. | Department Chair to ensure awareness. | | |
| **V.Review of Program Resources**<br>**A.Is there an appropriate level of institutional support for program operation?**<br>The dean, chairperson, and the general faculty are all in support of the program and would like to see the program grow to meet its potential. However, without creativity from the current faculty, space and equipment to run the program would be lacking. For example, an unused racquetball court was recently outfitted with personal equipment from a faculty member to create a lab space for the program. Without personal equipment, | Determine if course fees are appropriate to help fund the maintenance / replacement of equipment.<br><br>Brainstorm other ways to provide such funding. | By end of 2021-2022 academic year - HPE Department and Graduate Curriculum Committee | |

| Recommendation | Action | Timing & Responsible Person/Group | Resources |
|---|---|---|---|
| this space would not be utilized, and students would be lacking experiences. Additionally, without oversight of the TechFit space, there would not be opportunities for students to gain additional hands-on experiences.<br>It is also unclear how equipment maintenance and replacement will be funded. There are several grant and other monetary supports from the college, but many of these grants are small in dollar amount and are not sufficient to provide some of the more advanced equipment needed to keep the program relevant long term. It is important to examine sustainable funding patterns for the foreseeable future to make sure that the institutional support is sufficient. | | | |
| **B.Are faculty, library, professional development and other program resources sufficient?** | | | |
| While professional development funds are available, there has been a 50% decrease in funding, which can make keeping professional certifications and credentials current a challenge. While the COVID-19 pandemic has played a role nationally on college and university funding, temporary reductions to whether the financial challenges need to be restored to keep faculty sustained in their professional development. There are | Faculty consider online options for conferences rather than face to face to keep costs down.<br><br>Department can brainstorm ways to provide funds for travel to conferences.<br><br>The Program Director is now the AR State NSCA Director, so this may help as local conferences may be more accessible to faculty. | Ongoing – all HPE faculty<br><br>Ongoing – HPE department<br><br>Next 3 years – Program Director | Professional organizations<br><br>NSCA |

| Recommendation | Action | Timing & Responsible Person/Group | Resources |
|---|---|---|---|
| increasing opportunities for remote faculty development, such as online conferences and facultyfocus.com. However, these types of activities are still costly and do not afford the ability to recruit students and faculty to the program. | | | |
| **VI.Review of Program Effectiveness**<br>**B.Indicate the program areas in need of improvement within the next 12 months; and over the next 2-5 years.**<br>*Program areas of improvement within the next 12 months:*<br>1) Suggest changing verbiage to consistently be "strength & conditioning" in all program-related documents (some instances stated "strength coaches". Additional faculty cooperation may be solicited to increase consistency across course syllabi and related documents. | Review website, syllabi, and program related documentation. | Fall 2021 semester – Program Director and SCS faculty | |
| 2) Targeted marketing assistance from the ATU marketing department, alumni relations, and the greater ATU community. | Reach out to MARCOMM to see what the next steps are for continued marketing. | At least 2x per semester on an ongoing basis – Program Director | MARCOMM and Admissions |
| | Program Director will continue personal learning related to marketing (reading *Art of Digital* Marketing) and employ things learned as she goes. | Complete book by December 2021 – Program Director<br><br>Employ on ongoing basis – Program Director | *Art of Digital Marketing* |
| 3) Create a matrix of CSCS competencies and matching curriculum components for organization and easier assessment. | Create the matrix.<br><br>Consider other certifications that such alignments may benefit our students (NSCA-TSAC, | 2021-2022 Academic Year – Program Director/SCS Faculty/ Graduate Curriculum Committee | NSCA's CSCS Examination Detailed Content Outline (Appendix F of NSCA Certification Handbook) |

| Recommendation | Action | Timing & Responsible Person/Group | Resources |
|---|---|---|---|
| | CSCCa-SCCC, NASM-PES, NCSF-CSC, and ISSA-SCC) | Look at 1 certification for the following academic calendar years – Program Director/SCS Faculty/ Graduate Curriculum Committee | |
| 4) Add objectives related to evidence-led practice in strength & conditioning. | Determine whether these should be program level or course level objectives. Add at appropriate level. | 2021-2022 Academic Year – Program Director/SCS Faculty/ Graduate Curriculum Committee | |
| 5) Taking the three program goals for assessment purposes and identifying key competencies for each goal to streamline assessment and make a robust and consistent assessment plan. | Create sub-level objectives in program assessment that are mapped to the CSCS exam. | 2-5 years - Program Director and the Graduate Curriculum Committee | |
| 6) Meeting with key personnel at ATU from the Dean's Office to President's Cabinet to enhance understanding of the program and what strength & conditioning is as a field to advocate for resources. | Begin by meeting with the Dean and determine a plan to meet with the others named here. Create a strategy for educating them related to the SCS program. | Fall 2021 – Program Director and SCS faculty approach Dean.<br><br>Spring 2022 – Program Director and SCS faculty follow strategy developed with the Dean to approach others. | |
| *Program areas of improvement within the next 2-5 years:*<br>1) Work with alumni association or other entity to track graduates for marketing purposes and to keep records of where students are working. | Reach out to the Alumni Association to determine what records are available and what data may be obtainable. Determine who keeps track of the data and create a plan for managing/disseminating it. | By end of 2023-2024 academic year – Program Director and Alumni Association staff | Alumni Association |
| 2) Create separate research methods and statistics courses | Address the need and feasibility. | Fall 2024 – Graduate Curriculum Committee | Other departments on campus offering research and statistics courses |
| | If determined to be needed, begin curriculum change process. | Initiate change in 2025-2026 academic year (target deadline for changes July 1, 2026) – Graduate Curriculum Committee | |
| 3) Examine a hybrid option and a residential option to enhance accessibility of the | Continue examining the feasibility of a hybrid option. Begin curriculum | Begin curriculum changes in 2024-2025 academic | |

| Recommendation | Action | Timing & Responsible Person/Group | Resources |
|---|---|---|---|
| program beyond the Russellville, AR region and reach the surrounding states. | changes, if deemed feasible. | year – Graduate Curriculum Committee | |
| 4) Increase funding to make self-sustaining lab spaces that are not reliant on personal equipment of faculty or staff. | Determine if course fees are appropriate and begin process of instituting, if so determined. | 2023-2024 academic year – Graduate Curriculum Committee | |
| | Brainstorm and seek alternative funding sources. | Beginning in fall 2021 and ongoing – HPE department | Majors clubs may be able to help stage fundraisers. |

# Academic Program Review
# External Reviewers

**Stephen Gonzalez, PhD, CMPC- Dartmouth College**
**Brian K. Schilling, PhD, CSCS, FNSCA- The University of Nevada, Las Vegas**

**DEPARTMENT OF HEALTH & PHYSICAL EDUCATION**

**MS- Strength & Conditioning Studies**

**April 12, 2021**

Stephen P. Gonzalez

**Stephen Gonzalez, PhD, CMPC**

Brian K. Schilling

**Brian K. Schilling, PhD, CSCS, FNSCA**

# Arkansas Tech Strength & Conditioning Studies Program Review

**I.Review of Program Goals, Objectives and Activities**

**A.Are the intended educational (learning) goals for the program appropriate and assessed?**

The intended educational (learning) goals for the program are appropriate given the science to practice nature of strength & conditioning. The program goals are scientific knowledge, practical knowledge, and combined scientific/practical knowledge for successful research or project-based work. The assessment of the program goals is based upon several assignments and subject areas all involved in successfully testing for certification (Certified Strength & Conditioning Specialist; CSCS) and performing the duties of a strength & conditioning professional. Furthermore, the graduate survey is a great tool for assessment, and supplementary means to track alumni may assist in assessing the program's long-term impact.

While the assessment program has various assignments from a variety of subject areas and with established passing standards, more specificity in the program goals would better align the goals and assessments. For example, scientific knowledge is a categorical goal, but specific objectives or knowledge areas assessed are nutrition, physiology, motor learning, and biomechanics. Making these assessed areas goals of the program and tying them into a matrix of key learning outcomes for the CSCS exam would make the goals and assessments more specific. As the NSCA strives for program accreditation by 2030, the learning outcomes will become much clearer for all programs. Since the "hands-on" portion of the CSCS is limited, the program does a fantastic job of assessing the practical aspects of strength & conditioning.

Additionally, practical knowledge involves planning, problem solving, and application as categories. Having this specificity in the assessment would make assessment clear and easier for faculty to make programmatic adjustments. We discussed the admissions criteria for the program, but they were not present in the report. Due to the diverse nature of programs in this field, careful examination of the admission criteria can facilitate the development of appropriate program goals.

**B.How are the faculty and students accomplishing the program's goals and objectives?**

Faculty and students are accomplishing the program's goals and objectives by faculty offering, and students completing, a comprehensive curriculum aimed at preparing students for the science and application of strength & conditioning. The faculty provide both scientific and theory based classes, applied and practical skill based classes, and a comprehensive project or research project. The students are accomplishing the goals and objectives of the program through successful completion of the curriculum as well as through passing the CSCS exam. The pass rate for ATU students taking the CSCS exam would be helpful, but that is not yet available. The program should solicit the help of the NSCA in tracking ATU students that take the CSCS exam.

**C.How is the program meeting market/industry demands and/or preparing students for advanced study?**

There is substantial overall demand as demonstrated by the Bureau of Labor Statistics data. Since the data are limited to the grouping of coaches and scouts, the Bachelor's degree education and median pay are not likely applicable to S&C professionals. Examining the statistics for related careers such as Exercise Physiologists, Athletic Trainers, and Exercise Trainers suggests a robust demand for strength & conditioning professionals with a Master's degree.

The ATU program is meeting market and industry demands by being one of the few strength & conditioning programs in this region of the United States. With Arkansas having shared borders with numerous states and offering in-state tuition for students from those bordering states, the program is able to meet the "faster than average" growth of strength & conditioning in the United States as well as the region. Strength & conditioning continues to grow not just scholastically (high schools, colleges) but also in private sectors (corporate wellness, professional sports) and in the military/first responder communities.

**D.Is there sufficient student demand for the program?**

The program is a relatively new graduate offering for ATU and the region. Despite the relatively youth of the program historically, the program has had a reasonable growth which indicated a student demand for the program. Given that the increase for jobs and careers in strength & conditioning are growing, the program demand will increase as the program establishes itself further. Student demand may increase with the increase in military-specific strength & conditioning employment opportunities.

**E.Do course enrollments and program graduation/completion rates justify the required resources?**

The applied program content and technology-related aspects of the field justify the current resources. In fact, the faculty have donated their own resources to maximize the potential of the program, and we expect enrollment to increase based on the market demand and the program's expanded recruiting strategy. The field of strength & conditioning is constantly evolving along with jobs in the health, wellness, fitness, and sport sectors. As a result, new technologies, training modalities, and equipment are evolving and the required resources for a successful strength & conditioning program can be demanding. The current resources for the program are mostly shared spaces with a modest laboratory and personal equipment that is provided from faculty. These resources are key to running a program that maintains and grows enrollment while also setting students up for high levels of success.

**II.Review of Program Curriculum**

**A.Is the program curriculum appropriate to meet current and future market/industry needs and/or to prepare students for advanced study?**

The program curriculum is strong, and especially strong in the area of hands-on skills training. Since undergraduate programs tend to have more emphasis on the theoretical, this MS program is effective in giving graduates a stronger applied skill set.

The program curriculum is aligned with the necessary competencies for industry needs and for advanced study. While the number of students pursuing advanced study following their completion of this program is low, the science based assignments, peer-reviewed article usage, and faculty mentoring have prepared the students well for understanding research and preparing students for PhD programs. The strength of this program is the "hands on" and application classes, as evidenced by high CSCS exam passing rates (especially on the application component) and student success. Students mentioned how the syllabi and courses align well with the CSCS study guide and those that have taken the exam feel prepared.

One area of improvement for the curriculum is to offer a research methods class and then a separate statistics class. Having one class cover research methods and statistics in the same 15-week semester does not allow for more in-depth inquiry that would be necessary for advanced study in an evidence-led field. In fact, some programs in exercise & sport science require up to two courses in statistics, as we as both a research methods and scientific communication course. The program director may also consider a cohort-style pattern that would allow for careful planning of course offerings and increase the likelihood of courses making enrollment minimums.

**B.Are institutional policies and procedures appropriate to keep the program curriculum current to meet industry standards?**
The institutional policies and procedures in place to keep to program curriculum current are appropriate. The program has its own committee to review the curriculum and utilizes program assessment to ensure the curriculum is meeting standards. This process allows for rigor as well as flexibility at the faculty level to properly assess and plan changes to the curriculum.

**C.Are program exit requirements appropriate?**
The GPA, grade implications (only allowing for two C grades in the program), and the flexibility of the capstone requirement are appropriate given the goals of the program as well as meeting industry standards. In more detail, the capstone project allows for an internship, a research project, and a creative project. These three options allow students to get more hands on experience or to prepare themselves for advanced study and are fitting for an evidence-led profession. With limited internship sites available, the program appropriately emphasizes the internship option. The program may consider utilizing LinkedIn groups or something similar to keep track of alumni and therefore assess the program's long-term impact (including exit requirements) based on alumni feedback.

**D.Does the program contain evidence of good breath/focus and currency, including consistency with good practice?**
The program's evidence of breath and focus is the aligning of competencies with the CSCS examination requirements. The CSCS is the "gold standard" of entry-level strength & conditioning and a major requirement for work in the field. Therefore, the program's alignment with the NSCA and current trends in science makes it a program that is current and in line with best practices. The program may consider additional content related to military/first responder strength & conditioning.

**E.Are students introduced to experiences within the workplace and introduced to professionals in the field?**
The internship option allows students to have formal experiences with professionals in the field, and the main program faculty maintain the CSCS certifications themselves. The hands on components of the program provide opportunities in and out of class. Those students pursuing the internship option are required to complete hours under a CSCS professional, further preparing students for professional work.

**F.Does the program promote and support interdisciplinary initiatives?**
The field of strength & conditioning is interdisciplinary by nature, since there are organized fields of study in the subdisciplines that constitute strength & conditioning as a whole. The creative project option offered as part of the capstone requirement allows for students to have creative license over approaches to strength & conditioning broadly. Given that the department offers courses across several disciplines, students have the option of pursuing interdisciplinary work. While there are some interdisciplinary opportunities, this could be a focus for the program moving forward in engaging campus and the region. In particular, strength & conditioning professionals increasingly serve on interdisciplinary teams that might include Registered Dietitians, medical professionals, mental performance professionals, and more.

**G.Does the program provide respect and understanding for cultural diversity as evidenced in the curriculum, in program activities, in assignment of program responsibly and duties; in honors, awards and scholarship recognition; in recruitment?**
Cultural diversity is provided in the program through assignments and through specific courses. Of note, nutrition offers a unit on gender and age that specifically addresses diversity and the entire current issues class covers a wide range of topics, including diversity. The program can include recent hires in the department to diversify its faculty, and can prioritize further diversity when current financial strain and hiring challenges subside.

The program could benefit from being more specific regarding cultural diversity in its other courses, specifically in assignment descriptions or syllabi outlines. During the live portion of the review, the reviewers discussed recruitment strategies that could increase the cultural diversity of the students enrolled.

**III.Review of Academic Support**
**A.Does the program provide appropriate quality and quantity of academic advising and mentoring of students?**
The advising and mentoring is appropriately performed by the program director and faculty. At the MS level, central advising is no longer suitable, and the faculty take over in this capacity. In interviewing the students as part of the review, students unprompted talked about the responsiveness of faculty, the caring nature of faculty, and the quality advising. The accessibility of the faculty to the students, both virtually and in person, are a strength of the program. Students also highlighted the class size as ideal, allowing for sufficient interaction with the faculty.

**B.Does the program provide for retention of qualified students from term to term and support student progress toward and achievement of graduation?**
As with advising and mentoring, retention, progression, and completion support are appropriately performed by the program faculty. Given the small nature of the program, the provision of formal retention efforts are not clearly stated because the faculty are in constant close contact with the students. Additional support outside of the program involves the use of student services and librarians, which is typical for graduate programs of this size.

**IV.Review of Program Faculty**
**A.Do program faculty have appropriate academic credentials and/or professional licensure/certification?**
All program faculty have terminal degrees in their fields and the faculty teaching the main classes in the program hold the CSCS credential. Additionally, all faculty are active in forms of scholarship and service.

**B.Are the faculty orientation and faculty evaluation processes appropriate?**
Increased effort should be made to provide comprehensive evaluations of teaching effectiveness in higher education. Many programs rely disproportionally on student evaluations of teaching which are wrought with shortcomings. Faculty evaluation processes at ATU relies heavily on student evaluations. However, the departmental chairperson also reviews faculty in the classroom and online (viewing materials and class shells). Given that there are more than student evaluations involved in faculty evaluation, this is appropriate and consistent with best practices.
Other forms of peer review in teaching may help to reduce the burden on the department chair.

The faculty orientation at ATU takes place over the course of a whole year for a first year faculty member. Many institutions across the country are starting to adopt year long cohort approaches to faculty orientation to spur relationships to other faculty members and to help with retainment of resources and institutional knowledge. ATU's faculty orientation process is extensive and covers a wide range of topics in a manageable manner. I find the faculty orientation process at ATU to be an institutional strength.

**C.Is the faculty workload in keeping with best practices?**
Faculty workload for similar programs in the US varies considerably based on research resources, research expectations and differentiated staffing. Faculty work load in the program is demanding on the core graduate faculty given that all are currently teaching overloads. Without a course load that allows for research time, the scholarly capabilities of faculty could be negatively impacted. The fact that the faculty are still active in publishing and presenting with course overloads to serve the students is impressive but not sustainable. Evidence-led professions like strength & conditioning benefit greatly when educators are involved in the process of generating new evidence.

**V.Review of Program Resources**
**A.Is there an appropriate level of institutional support for program operation?**
The dean, chairperson, and the general faculty are all in support of the program and would like to see the program grow to meet its potential. However, without creativity from the current faculty, space and equipment to run the program would be lacking. For example, an unused racquetball court was recently outfitted with personal equipment from a faculty member to create a lab space for the program. Without personal equipment, this space would not be utilized and students would be lacking experiences. Additionally, without oversight of the TechFit space, there would not be opportunities for students to gain additional hands on experiences.

It is also unclear how equipment maintence and replacement will be funded. There are several grant and other monetary supports from the college, but many of these grants are small in dollar amount and are not sufficient to provide some of the more advanced equipment needed to keep the program relevant long term. It is important to examine sustainable funding patterns for the foreseeable future to make sure that the institutional support is sufficient.

**B.Are faculty, library, professional development and other program resources sufficient?**
Universally, faculty and students have mentioned that the library is a vital resource to their work. Both faculty and students highlighted the helpful nature of librarians and the ability to get most books and research articles needed to successfully conduct research. Expedient and efficient interlibrary loan capabilities are crucial. For faculty, Center for Excellence in Teaching and Learning (CETL) has provided instructional support and online course adoption assistance- a vital need for current and future courses.

While professional development funds are available, there has been a 50% decrease in funding, which can make keeping professional certifications and credentials current a challenge. While the COVID-19 pandemic has played a role nationally on college and university funding, temporary reductions to whether the financial challenges need to be restored to keep faculty sustained in their professional development. There are increasing opportunities for remote faculty development, such as online conferences and facultyfocus.com. However, these types of activities are still costly and do not afford the ability to recruit students and faculty to the program.

**VI.Review of Program Effectiveness**
**A.Indicate areas of program strength.**
The program faculty are a clear area of strength. Additionally, the program is exceptionally strong in its application and hands on experiences. Many graduate programs sit at polar opposites of either applied or research based, but the program provides ample amounts of research based assignments and applied experiences needed to be successful practitioners of the field. Additionally, the program is exceptionally strong at student-centered and focused. One student mentioned choosing ATU's program over Florida State and other larger universities due to the caring and

responsive nature of ATU's faculty. Finally, the program offers and exceptional value in the region and is establishing a good reputation despite its early years of existence.

**B.Indicate the program areas in need of improvement within the next 12 months; and over the next 2-5 years.**
Program areas of improvement within the next 12 months:
1) Suggest changing verbiage to consistently be "strength & conditioning" in all program-related documents (some instances stated "strength coaches". Additional faculty cooperation may be solicited to increase consistency across course syllabi and related documents.
2) Targeted marketing assistance from the ATU marketing department, alumni relations, and the greater ATU community.
3) Create a matrix of CSCS competencies and matching curriculum components for organization and easier assessment.
4) Add objectives related to evidence-led practice in strength & conditioning.
5) Taking the three program goals for assessment purposes and identifying key competencies for each goal to streamline assessment and make a robust and consistent assessment plan.
6) Meeting with key personnel at ATU from the Dean's Office to President's Cabinet to enhance understanding of the program and what strength & conditioning is as a field to advocate for resources.

Program areas of improvement within the next 2-5 years:
1) Work with alumni association or other entity to track graduates for marketing purposes and to keep records of where students are working.
2) Create separate research methods and statistics courses
3) Examine a hybrid option and a residential option to enhance accessibility of the program beyond the Russellville, AR region and reach the surrounding states.
4) Increase funding to make self sustaining lab spaces that are not reliant on personal equipment of faculty or staff.

**C.Indicate areas for program development based on market/industry demands that have not been identified by the institution.**
The program has indicated evaluating additional tracks and options for the program, but these may not be needed.
Areas for program development based upon market/ industry demands that have not been identified by the institution include establishing relationships with community and recreation centers locally, tactical and first responders, and with hospitals or clinics. These areas are increasing in need of knowledgeable strength & conditioning practitioners that the Strength & Conditioning Studies program can address in the curriculum beyond athletes.

**VII.Review of Instruction by Distance Technology (if program courses offered by distance)**
**A.Are the program distance technology courses offered/delivered in accordance with best practices?**
There are no current best practices for online education in strength & conditioning. The program only offers one required course online, and an elective is also occasionally offered online. With the increasing use of learning management systems, the program faculty will have the ability to consider online and hybrid options in the future.

The COVID-19 response forced many of us to offer our courses synchronously via WebEx or similar formats, and the program faculty have done a commendable job in this area.

**B.Does the institution have appropriate procedures in place to assure the security of personal information?**
Unable to determine; Blackboard should meet industry standards for security of personal information.

**C.Are technology support services appropriate for students enrolled in and faculty teaching courses/programs utilizing technology?**
Based on the limited online course offerings, the support services seem adequate. The *Transition to Teaching Online* course offered to faculty is an example of an essential resource for faculty transitioning to hybrid/online delivery.

**D.Are policies for student/faculty ratio, and faculty course load in accordance with best practices?**
Unable to determine.

**E.Are policies on intellectual property in accordance with best practices?**
Unable to determine.

**VIII.Review of Program Research and Service**
**A.Are the intended research and creative outcomes for each program appropriate, assessed and results utilized?**
The intended outcomes for successful research, internships, or creative projects are assessed through the SCS 6103 course, which is a pass fail final project and presentation demonstrating integrated science and practice. The results of the assessment on program research and creative outcomes have demonstrated student aptitude in the data provided. As the faculty continue to examine research theses, this assessment may change to examine scholarly projects or presentations.

**B.Are the intended outreach/service/entrepreneurial outcomes for each program's initiatives appropriate assessed and results utilized?**
Unable to determine.

**IX.Local Reviewer Comments**

**A.How is the program meeting market/industry demands and/or preparing students for advanced study?**

**B.What program modifications are needed?**

**X.Report Summary**

**A.Include reviewer comments on the overall need for program graduates/completers in the local area, region, and/or nation over the next 5 years.**

There will be increased demand for graduates over the next five years, partly due to increased “professionalization” of strength & conditioning. With accreditation required by 2030, and an increase in the number of strength & conditioning jobs in the military, the program is well-situated.

**B.Include reviewer comments on overall program quality, state program review process, etc.**

The review process is not as robust without the ability for the reviewers to spend time on campus, but we feel we can make informed recommendations based on the review documentation and online interview process. The program faculty were engaged in the review process, and genuinely sought constructive feedback on how to maximize the program for the benefit of the student.

Strength and Conditioning Studies

Arkansas Tech University


Arkansas Department of Higher Education

Program Review

# Table of Contents

**Goals, Objectives, and Activities**

1. **Describe specific educational goals, objectives, and activities of the program.**

   The goal of the program is to prepare students for a career in coaching in the field of Strength and Conditioning. Part of this preparation is to ensure that students are ready to take the National Strength and Conditioning Association's Certified Strength and Conditioning Specialist exam. The program objectives are as follows:

   1) Students will acquire the necessary scientific knowledge to be effective strength coaches.
   2) Students will acquire the practical knowledge & skills to be effective strength coaches.
   3) Students will demonstrate combined scientific knowledge & practical knowledge / skills in a successful research or creative project or internship.

2. **Explain how the program serves the general education program and other disciplinary programs on the campus, if applicable**.

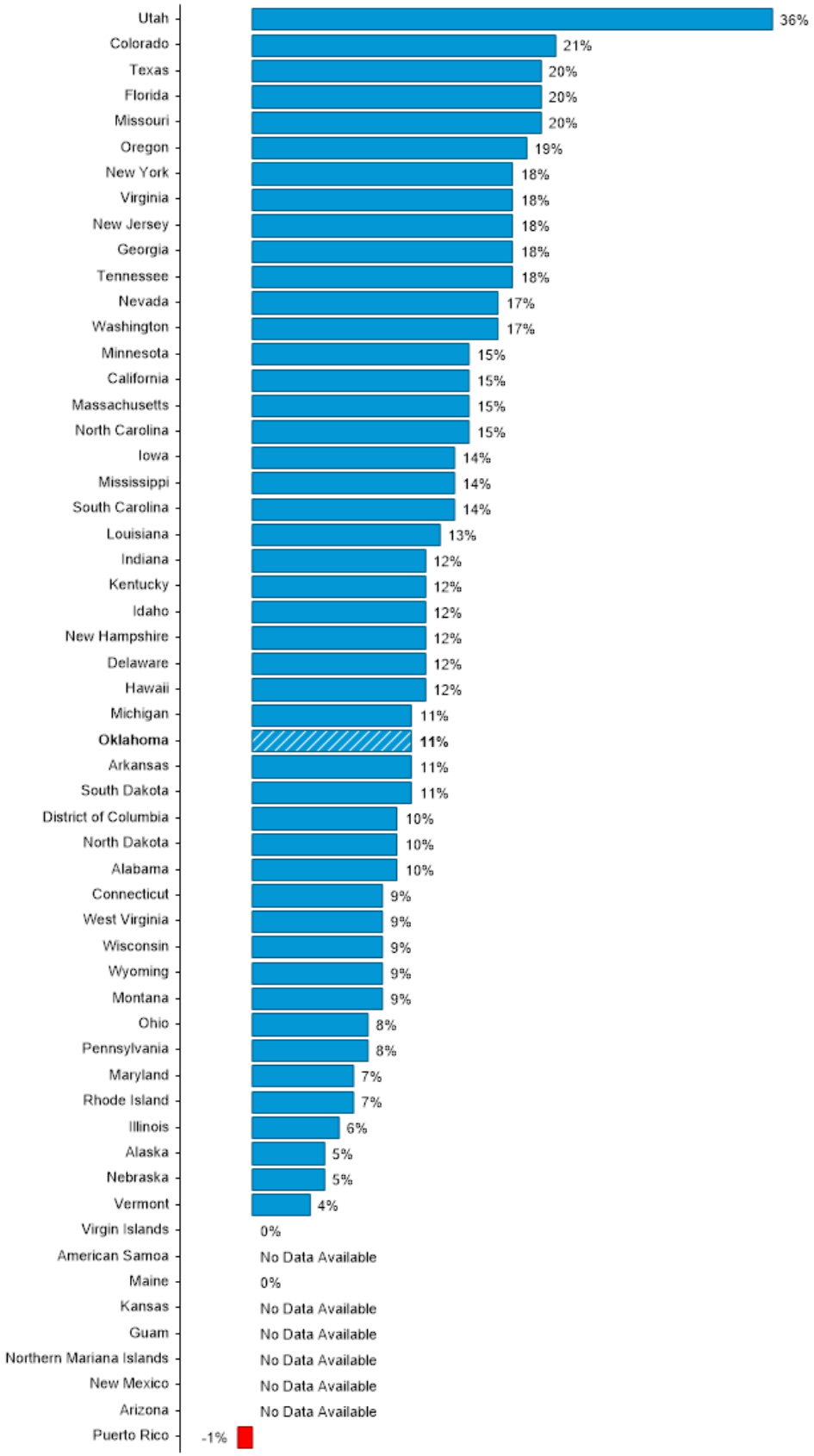
   Not applicable as this is a graduate program that builds on the undergraduate degree.

3. **Document market demand and/or state/industry need for careers stemming from the program.**

   According to the Bureau of Labor Statistics, the field of coaches and scouts is projected to grow 12% over the 10 year period from 2019-2029. This is labeled as "much faster than average."

| Quick Facts: Coaches and Scouts | |
|---|---|
| 2019 Median Pay | $34,840 per year |
| Typical Entry-Level Education | Bachelor's degree |
| Work Experience in a Related Occupation | None |
| On-the-job Training | None |
| Number of Jobs, 2019 | 292,000 |
| Job Outlook, 2019-29 | 12% (Much faster than average) |
| Employment Change, 2019-29 | 34,300 |

   The demand in Arkansas is projected to be an 11% growth, while in the surrounding states, the growth is similar or even greater. Growth is projected to be 11% in Oklahoma, 13% in Louisiana, 14% in Mississippi, 18% in Tennessee, and 20% in Texas and Missouri (see graphic below from https://www.careeronestop.org/Toolkit/StateAndLocal/ProjectedEmployment.aspx?soccode=272022&location=73533&dataview=chart&change=true&national=true).


Utah 36%
Colorado 21%
Texas 20%
Florida 20%
Missouri 20%
Oregon 19%
New York 18%
Virginia 18%
New Jersey 18%
Georgia 18%
Tennessee 18%
Nevada 17%
Washington 17%
Minnesota 15%
California 15%
Massachusetts 15%
North Carolina 15%
Iowa 14%
Mississippi 14%
South Carolina 14%
Louisiana 13%
Indiana 12%
Kentucky 12%
Idaho 12%
New Hampshire 12%
Delaware 12%
Hawaii 12%
Michigan 11%
Oklahoma 11%
Arkansas 11%
South Dakota 11%
District of Columbia 10%
North Dakota 10%
Alabama 10%
Connecticut 9%
West Virginia 9%
Wisconsin 9%
Wyoming 9%
Montana 9%
Ohio 8%
Pennsylvania 8%
Maryland 7%
Rhode Island 7%
Illinois 6%
Alaska 5%
Nebraska 5%
Vermont 4%
Virgin Islands 0%
American Samoa No Data Available
Maine 0%
Kansas No Data Available
Guam No Data Available
Northern Mariana Islands No Data Available
New Mexico No Data Available
Arizona No Data Available
Puerto Rico -1%

Pay for such jobs is greatest for those working in the collegiate environment. Because of the competitive nature of these jobs, individuals with a Master's degree have a greater chance of being hired in these positions that individuals who only have a Bachelor's degree.

| | |
|---|---|
| Colleges, universities, and professional schools; state, local, and private | $46,180 |
| Arts, entertainment, and recreation | 37,320 |
| Elementary and secondary schools; state, local, and private | 29,960 |

**4. Document student demand for the program.**

According to Gray and Associates' Program Evaluation System, the overall student demand for Health and Physical Education/Fitness, Other (CIP: 31.0599) is in the 17th percentile for the 2019-2020 academic year. The same system reports student demand for "on ground completions" for the state of Arkansas to be in the 94th percentile. (See the table below for complete in-state Student Demand data)

**Student Demand [ 1 Score ]**

**17 Pctl**

| Category | Pctl | Criterion | Value | Score |
|---|---|---|---|---|
| Size | 0 | Inquiry Volume (12 Months) | 0 | 0 |
| | 0 | Int'l Page Views (12 Months) | 0 | 0 |
| | | Google Search Volume (3 Months)* | NA | NS |
| | 94 | On-ground Completions at In-Market Institutions | 10 | NS |
| | 75 | Online Completions by In-Market Students | 0 | NS |
| | 92 | Sum of On-ground and Online Completions | 10 | 3 |
| Growth | 96 | Inquiry Volume YoY Change (Units) | 0 | 1 |
| | | Google Search YoY Change (Units)* | NA | NS |
| | 3 | Completion Volume YoY Change (Units) | -3 | -2 |
| | | Inquiry Volume YoY Change (%) | NA | NS |
| | | Google Search YoY Change (%)* | NA | NS |
| | 27 | Completion Volume YoY Change (%) | -23% | -1 |

When the comparative region is expanded from the state of Arkansas to the region (includes Oklahoma and Texas), the demand for the degree's CIP code rises to the 77th percentile. (See the table below for complete regional Student Demand data.)

**Student Demand [ 3 Score ]**

**77 Pctl**

| Category | Pctl | Criterion | Value | Score |
|---|---|---|---|---|
| Size | 0 | Inquiry Volume (12 Months) | 0 | 0 |
| | 0 | Int'l Page Views (12 Months) | 0 | NS |
| | | Google Search Volume (3 Months)* | NA | NS |
| | 0 | On-ground Completions at In-Market Institutions | 0 | NS |
| | 70 | Online Completions by In-Market Students | 1 | NS |
| | 57 | Sum of On-ground and Online Completions | 1 | 0 |
| Growth | 94 | Inquiry Volume YoY Change (Units) | 0 | 1 |
| | | Google Search YoY Change (Units)* | NA | NS |
| | 77 | Completion Volume YoY Change (Units) | 0 | 1 |
| | | Inquiry Volume YoY Change (%) | NA | NS |
| | | Google Search YoY Change (%)* | NA | NS |
| | 80 | Completion Volume YoY Change (%) | 41% | 1 |

National data show that demand for the degree falls into the 76$^{th}$ percentile, only slightly lower than the regional demand

**Student Demand [ 3 Score ]**

**76 Pctl**

| Category | Pctl | Criterion | Value | Score |
|---|---|---|---|---|
| Size | 0 | Inquiry Volume (12 Months) | 0 | 0 |
| | 0 | Int'l Page Views (12 Months) | 0 | NS |
| | | Google Search Volume (3 Months)* | NA | NS |
| | 64 | On-ground Completions at In-Market Institutions | 117 | NS |
| | 79 | Online Completions by In-Market Students | 74 | NS |
| | 68 | Sum of On-ground and Online Completions | 191 | 0 |
| Growth | 90 | Inquiry Volume YoY Change (Units) | 0 | 1 |
| | | Google Search YoY Change (Units)* | NA | NS |
| | 80 | Completion Volume YoY Change (Units) | 9 | 2 |
| | | Inquiry Volume YoY Change (%) | NA | NS |
| | | Google Search YoY Change (%)* | NA | NS |
| | 67 | Completion Volume YoY Change (%) | 5% | 0 |

The data shows a relatively low demand for the degree program in the state; however, the regional and national demand is significantly higher.

5. **Describe how program content parallels current thinking/trends in the field/trade (best practices, advisory committee recommendations, etc.).**

The Strength and Conditioning Studies program is designed to provide the foundational knowledge for students to become strength coaches at any level. It is designed to ensure that students are prepared to pass the Certified Strength and Conditioning Specialist (CSCS) exam through the National Strength and Conditioning Association (NSCA).

In the fall of 2017, we made some changes to the program to enhance the foundational science knowledge of students in the program. This was done because of feedback from students who took the CSCS exam and failed to pass the scientific foundations section on the first try. Most of our students had no difficulty with the practical portion of the exam. Since making these changes, we have had fewer students report having to retake the exam.

**Curriculum**

1. **Provide an outline for each program curriculum including the sequence of courses.**

   Most of the courses in the program can be taken in any order. The exceptions to this include SCS 6043 Techniques for Development of Hypertrophy, Strength & Power and SCS 6053 Techniques for Development of Speed, Agility, Reaction Time & Endurance, which are offered in the summer. These are taken only after a minimum of 6 credit hours in the program. Additionally, SCS 6103 Professional Project is treated as a capstone class and may only be taken in a student's final semester in the program.

2. **State the degree requirements, including general education requirements, institutional, college or school requirements, and major requirements.**

   The degree requirements are as follows:

   a. Thirty-three credit hours are required for completion of the Master of Science in Strength and Conditioning Studies degree.
      i. Required Core Courses (27 hours)
         1. PE 6033 Exercise Physiology
         2. PE 6043 Motor Learning & Control
         3. PE 6053 Biomechanics
         4. PE 6083 Research Methods and Statistics
         5. SCS 6013 Measurement and Evaluation in Strength and Conditioning
         6. SCS 6033 Strength & Conditioning Program Design & Development
         7. SCS 6043 Techniques for Development of Hypertrophy, Strength & Power
         8. SCS 6053 Techniques for Development of Speed, Agility, Reaction Time & Endurance
         9. SCS 6063 Trends in Sports Nutrition & Metabolism
      ii. Electives (3 hours)
         1. MATH 5173 Advanced Biostatistics
         2. PE 6063 Current Issues in Coaching & Athletics
         3. PE 6073 Exercise & Sport Behavior
         4. PE 6891-3 Independent Study
         5. SCS 6023 Scientific Foundations of Strength & Conditioning
         6. SCS 6083 Instructional Strategies for Strength Coaches
         7. SCS 6093 Exercise Science Seminar
      iii. Culminating Experience (3 hours)
         1. SCS 6103 Professional Project (could be research, internship, or other approved project)
   b. A minimum of 27 semester hours of graduate course work completed in residence at Arkansas Tech University.

c. A cumulative grade point average of a 3.00 or better must be achieved in all graduate work attempted at Arkansas Tech University, with a maximum of six (6) hours of "C" grades. A student receiving more than six (6) hours of "C" or grades lower than "C" should refer to the section of the catalog on Academic Probation and Dismissal.
d. Completion of all degree requirements within six (6) years from the time of unconditional or conditional admission into the program.

**3. Indicate the semester/year the major/program courses were last offered. Exclude general education courses.**

Course offerings have been as follows:

e. Spring 2021
    i. PE 6033 Exercise Physiology
    ii. PE 6043 Motor Learning
    iii. PE 6063 Current Issues in Coaching & Athletics (elective)
    iv. SCS 6013 Measurement and Evaluation in Strength and Conditioning – failed to make
    v. SCS 6033 Strength & Conditioning Program Design & Development
    vi. SCS 6103 Professional Project
f. Summer 2020
    i. SCS 6043 Techniques for Development of Hypertrophy, Strength & Power
    ii. SCS 6053 Techniques for Development of Speed, Agility, Reaction Time & Endurance
g. Fall 2020
    i. PE 6083 Research Design and Statistics in Physical Education
    ii. SCS 6063 Trends in Sports Nutrition and Metabolism
    iii. PE 6053 Biomechanics
    iv. SCS 6103 Professional Project
h. Core courses that have not been offered this academic year
    i. SCS 6013 Measurement and Evaluation in Strength and Conditioning – failed to make in Spring 2020
i. Electives that have not been offered this academic year
    i. SCS 6023 Scientific Foundations of Strength & Conditioning – Fall 2017
    ii. SCS 6083 Instructional Strategies for Strength Coaches – Spring 2019
    iii. SCS 6093 Exercise Science Seminar – Fall 2018

**4. Provide syllabi for discipline-specific courses and departmental objectives for each course.**

Table 2.5.1 shows the syllabi for the courses that are included in this report.

| Course Number | Course Title | Semester |
|---|---|---|
| PE 6033 | Exercise Physiology –<br>Dr. Gina Kraft | Spring 2021 |
| PE 6043 | Motor Learning & Control – | Spring 2021 |

| | | |
|---|---|---|
| | Dr. John O'Connor | |
| PE 6053 | Biomechanics –<br>Dr. Mike Waller | Fall 2020 |
| PE 6063 | Current Issues in Coaching & Athletics –<br>Dr. Gina Kraft | Spring 2021 |
| PE 6083 | Research Methods and Statistics –<br>Dr. Gina Kraft | Fall 2020 |
| SCS 6013 | Measurement and Evaluation in Strength and Conditioning -<br>Dr. Gina Kraft | Spring 2020 |
| SCS 6033 | Strength & Conditioning Program Design & Development –<br>Dr. Mike Waller | Spring 2021 |
| SCS 6043 | Techniques for Development of Hypertrophy, Strength & Power –<br>Dr. Mike Waller | Summer 2020 |
| SCS 6053 | Techniques for Development of Speed, Agility, Reaction Time & Endurance –<br>Dr. Mike Waller | Summer 2020 |
| SCS 6063 | Trends in Sports Nutrition & Metabolism –<br>Dr. Gina Kraft | Fall 2020 |
| SCS 6083 | Instructional Strategies for Strength Coaches –<br>Dr. Mike Waller | Spring 2019 |
| SCS 6093 | Exercise Science Seminar -<br>Dr. Gina Kraft | Fall 2018 |
| SCS 6103 | Professional Project –<br>Dr. Gina Kraft | Spring 2021 |

**S**yllabi are located in Appendix A. All departmental course objectives are listed on the appropriate syllabus.

5. **Outline the process for the introduction of new courses, including all internal curriculum review processes and the findings.**

The Strength and Conditioning Curriculum Committee addresses all new courses. New courses may be proposed because of changes in the field that lead to new content areas being deemed important or because of shifts in research that indicate new areas need to be included. Additionally, new courses might be proposed as a result of the assessment process to better fill in gaps in students' knowledge base. Finally, new courses could be proposed as result of the program review process.

A new course is proposed to the full committee. The committee determines the appropriate objectives for the course. Once this is done, the university curriculum process for new courses is followed.

6. **List courses in the proposed degree program currently offered by distance delivery.**

   The only courses offered fully online are PE 6043 Motor Learning and an occasional elective, for example PE 6063 Current Issues in Coaching & Athletics in being taught online in Spring 2021.

7. **Describe the instructor-to-student and student-to-student interaction for distance courses.**

   Instructors provide feedback to student assignments, preferably in within a week of assignment submission. Additionally, instructors are encouraged to meet students at least 1x during the semester via WebEx. Students may interact via Discussion Board assignments or other group assignment submissions, depending on the course.

**Program Faculty (full-time/adjunct/part-time)**

1. **Provide curriculum vitae or program faculty information form for all full-time program faculty.** The vita or form should include the following: all degrees and institutions granting the degrees; field or specialty of degrees; number of years employed as program faculty at the institution; current academic rank, if applicable; professional certifications/licenses; evidence of quality and quantity of scholarly/research activity; evidence of quality and quantity of service activities; evidence of professional activities and non-teaching work experiences related to courses taught; list of course numbers/course titles of credit courses taught over the past two academic years; and evidence of quality teaching.

   Dr. Gina Kraft is the only full-time faculty in the program. She serves as Program Director, for which she receives a 3-hour release. As graduate faculty, a full-time teaching load is 9 hours. Her vita is listed in Appendix B. It includes all requested information except for evidence of quality teaching.

   Dr. Kraft has consistently received high course evaluations from students. Her average since beginning at ATU is 4.84 on a 5-point scale. You can see the range of course evaluation since she began teaching at ATU. This is while maintaining an overload in 6 semesters (Spring 2016, Spring 2017, Fall 2018, Spring 2019, Fall 2019, Spring 2020).

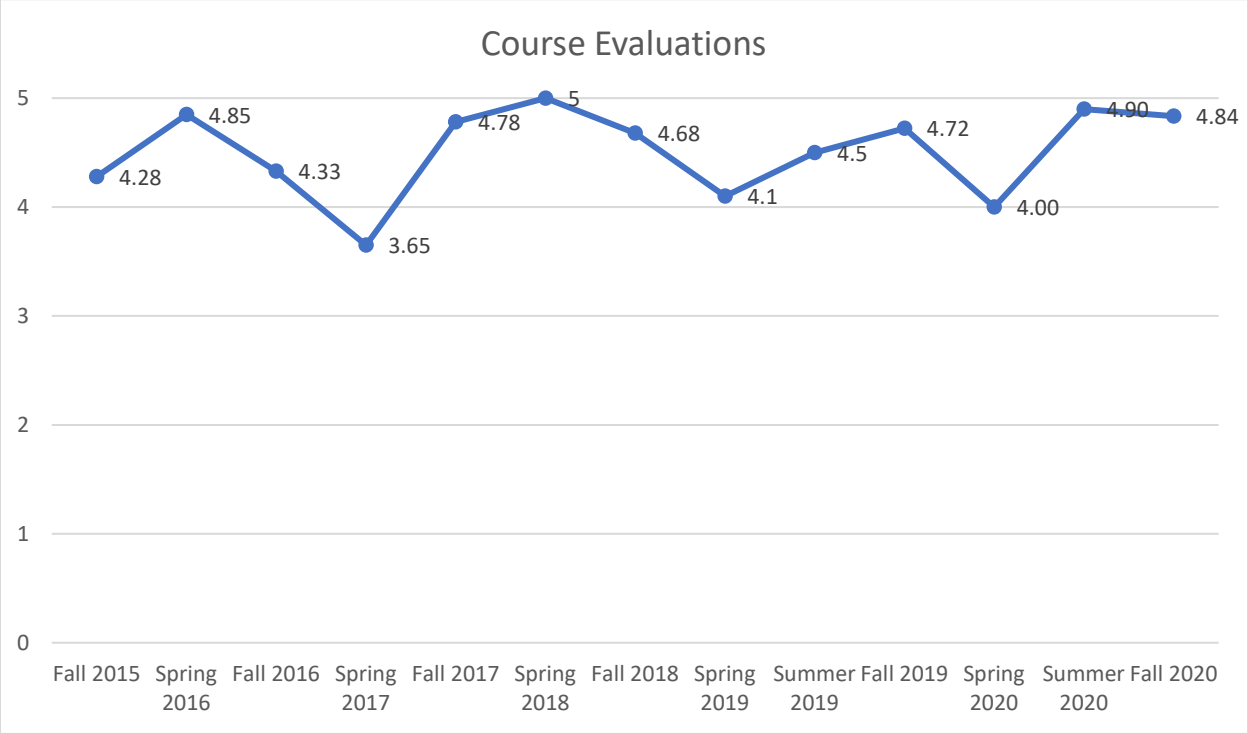



*Figure 3.1.1: Full-time Faculty Student Evaluation Data*

In addition to Dr. Kraft, 3 other faculty teach part-time in the program. Dr. Mike Waller teaches most extensively with a total of 5 courses (4 core courses and 1 elective) that he regularly teaches in the program. Dr. Rockie Pederson or Dr. John O'Connor teach the course in Motor

Learning, depending on course loads. Curriculum Vitae for these faculty are located in Appendix B.

2. **Indicate the academic credentials required for adjunct/part-time faculty teaching major/program courses.**

   Adjunct and part-time faculty teaching in the program must have a terminal degree in the field. Certification through the National Strength and Conditioning Association as a Certified Strength and Conditioning Specialist is preferred; although, certification through the Collegiate Strength Coaches Association is also acceptable. Prior teaching experience is a required with positive student evaluations. This experience may be at the undergraduate level. Evidence of scholarly work is also required, with a minimum of 1 publication/presentation/other evidence per academic year.

3. **Describe the orientation and evaluation processes for faculty, including adjunct and part-time faculty.**

   <u>Faculty Orientation</u>

   Arkansas Tech requires all new faculty members to attend a New Faculty Orientation program in August of their first academic year. This orientation program is designed to facilitate a newly hired faculty members' transition to Arkansas Tech. The orientation program provides information to help faculty members better understand the institution, its vision and values, and its policies and procedures. New faculty members obtain their faculty identification card and parking permit during this event. Fellowship with campus administrators and other new faculty, a campus tour and other events help prepare new faculty members for their new work environment.

   During their initial year of teaching at Arkansas Tech, faculty members attend weekly sessions of the New Faculty Academy and are given a one-course release during their first semester. The mission of the New Faculty Orientation/Academy is to inspire new faculty to become part of the ATU community while informing them about institutional procedures and pedagogical techniques.

   The Faculty Orientation Schedule for the most recent New Faculty Orientation (during the fall of 2020) and the fall 2020 schedule for the New Faculty Academy are listed below.

Hybrid New Faculty Welcome - 2020-2021

"*An opportunity to inform and inspire faculty who are new to Arkansas Tech University.*"

**Monday, August 3, 2020** – "Getting Started" (Face-to-Face-Library- Ross Pendergraft Library, Rooms 331, 332 and 334)

9:00 a.m. – Introductions and Discussion of Outcomes, Icebreaker

9:45 a.m. – Verbal Tour of Library – Mr. Brent Etzel, Director of Library

10:15 a.m. – Committee-Led Training – OneTech (Ms. Charity Park), Blackboard (Dr. Soumia Amrine), and Kaltura (Dr. Michael Wang)

11:30 a.m. – WebEx Training – Mr. Alex Manly, Learning Technology Resources Director

Noon(ish) – Explain plan for week and address questions

**Tuesday, August 4, 2020** – "Big Picture" (Blackboard Shell/Synchronous Session)

Inauguration Pillars and Accomplishments of University President, Dr. Robin Bowen

Welcome from Vice President for Academic Affairs, Dr. Barbara Johnson

University History – Mr. Sam Strasner, Director of University Relations

The Typical ATU Student – Ms. Carrie Phillips, Director of University Marketing & Communication

1:00 p.m. – Synchronous session via WebEx with:

- Jerry the Bulldog Interaction
- Fun Activity
- Questions on pre-recorded materials in Bb shell

*Be sure to schedule time to visit with your department head.

**Wednesday, August 5, 2020** – "Teaching Techniques" (Blackboard Shell/Synchronous Session)

Defining Objectives & Blooms Taxonomy – Christine Austin, Director of Assessment and Institutional Effectiveness, Professor of College Student Personnel

Depth of Knowledge Levels – Dr. Bill Morelan, EDLD Program Director, Assistant Professor in the Center for Leadership and Learning

Overview of Student-Centered Learning – Dr. Robin Lasey, Director of the Center for Excellence in Teaching and Learning, Associate Professor of Chemistry

Syllabus Workshop – Dr. Robin Lasey, Director of the Center for Excellence in Teaching and Learning, Associate Professor of Chemistry (pre-recorded in Bb)

Best Practices for Online Teaching – Materials located in Teaching Resources folder in New Faculty Orientation

1:00 p.m. – Synchronous session via WebEx with:

- Frances and Soumia sharing how they created engaging syllabi

- Discuss one concept faculty learned and plan to integrate into a fall class
- Questions on pre-recorded materials in Bb shell

**Thursday, August 6, 2020** – "The Other 20%" (Blackboard Shell/Synchronous Session)

Undergraduate Research Center – Dr. Nate Chapman, Director of Undergraduate Research Center, Assistant Professor of Sociology

Interdisciplinary Research – Dr. Arwen Taylor, Assistant Professor of English

1:00 p.m. – Synchronous session via WebEx with:

- Interact with colleagues
- Visit with Dr. Nate Chapman and Dr. Arwen Taylor
- Questions on pre-recorded materials in Bb shell
- Additional questions on how we can help

**Friday, August 7, 2020** – "Community" (Face-to-Face-Hindsman Bell Tower)

9:00 a.m. – Meet at the Hindsman Bell Tower for a fun, educational and engaging socially-distanced, masked activity

The schedule for the New Faculty Academy for 2020-2021 is below.

**New Faculty Academy Fall 2020 Schedule**
(Each virtual session will be held Monday 3-5 p.m. on WebEx)

**September 14**

- Dr. Bowen, President of Arkansas Tech
- Dr. Johnson, Vice President for Academic Affairs
- Discuss Weeks 1-3 of Lang Book in WebEx Teams

**September 28**

- FERPA- Mr. Thomas Pennington, Associate Vice President and Counsel to the President and Professor of Legal Studies
- Clery Report and Emergency Preparedness- Mr. Josh McMillian, Chief of Public Safety
- Sexual Harassment and Title IX- Ms. Amy Pennington, Associate Vice President for Student Affairs & Title IX Coordinator
- Discuss Weeks 4-6 of Lang book in WebEx Teams

**October 12**

- Assessment and Code of Academic Integrity- Dr. Christine Austin, Director of Assessment and Institutional Effectiveness, Professor of College Student Personnel
- Office of Sponsored Programs and University Initiatives (OSPUI)- Dr. Richard Schoephoerster, Dean of the Graduate College and Research, Mr. Greg Crouch, Director of Grants and Sponsored Programs, Ms. Sara Bailey, Grants Coordinator, and Ms. Sarah Burnett, STEM Project Coordinator
- Discuss Weeks 7-9 of Lang book in WebEx Teams

**October 26**

- Annual Evaluations/Peer Review/Tenure and Promotion Panel- Dr. Patrick Hagge, Associate Professor of Geography, Dr. Matt Young, Assistant Professor of Electrical Engineering, and Dr. Gina Kraft, Associate Professor of Health and Physical Education and Program Director of the Master of Science in Strength and Conditioning
- Discuss Weeks 10-12 of Lang book in WebEx Teams

**November 9**

- Interdisciplinary Problem Based Learning, Julie Mikles-Schluterman, Director of Center for Community Engagement and Academic Outreach, Professor of Sociology
- Service opportunities and how to get involved, Susan West, Assistant Professor of Hospitality Administration
- Discuss Weeks 13-15 of Lang book in WebEx Teams

Materials in Blackboard: One Tech/Attendance/Grades, Tammy Weaver, Registrar

**New Faculty Academy Spring 2021 Schedule**

(Each virtual session will be held Monday 3-5 p.m. on WebEx)

**January 25**

- Build your Own Class Mobile App without Coding

Dr. Rebecca Callaway, Professor of Curriculum and Instruction and Dr. Mohamed Ibrahim, Associate Professor of Curriculum and Instruction

**February 8**

- Team-Based Learning for Synchronous/Asynchronous Online and Face to Face Classes

Ms. Beth Gray, Associate Professor of Emergency Management

**February 22**

- Mid-Semester Decompression Session: Our Work-Life Balance (or Inbalance)
- Sharing our Lessons Learned from this year

Erin Clair, Director of General Education, Director of Operations, College of Arts & Humanities, Associate Professor of English

**March 8**

- Governance as part of the institution and how to get involved or serve on different committees (standing committees, etc.)

Dr. Jon Clements, Faculty Senate President, Associate Professor of Music and Dr. David Eshelman, Immediate Past Faculty Senate President, Professor of Communication and Theatre Director.

**March 29**

- Scholarship and Working with Undergraduates

Dr. Nate Chapman, Director, Center for Undergraduate Research, Assistant Professor of Sociology

- Panel on Community Organizations

Ms. Angela Bonds, Director of Leadership Development and Government Affairs, Russellville Chamber of Commerce

**April 12**

- Process Oriented Guided Inquiry Learning

Dr. Robin Lasey, Associate Professor of Chemistry, Director, Arkansas Governor's School, Director, Center for Excellence in Teaching and Learning

**TBD**

End of year celebration

Faculty Evaluation

Full-time faculty members' teaching, scholarship, and service are evaluated annually by the Departmental Promotion and Tenure Committee (DPTC) and the Department Head. The DPTC is composed of the tenured members of the department.

The Department Head directly observes each full-time faculty member at least once. The observation usually occurs during the faculty member's first year at Arkansas Tech. The Department Head provides the faculty members with a summary evaluation of the observation. Probationary faculty members are also observed each year by a member of the DPTC. A formative evaluation based on the DPTC observation is shared with the faculty member and student evaluations are administered in all classes each semester. After Arkansas Tech switched to online student evaluations, the percentage of students participating declined. Arkansas Tech has worked to improve participation rates, but since the change the

Department Head has considered varying participation rates when using student evaluations.

All full-time faculty members submit portfolios covering teaching, advising, scholarship, and service to the department's DPTC each year. The committee meets with each probationary faculty member and any tenured faculty members who request a meeting. The DPTC provides each faculty member and the Department Head with a formative evaluation and forwards faculty members' portfolios to the Department Head.

The Department Head writes a summative evaluation in which each faculty member is assigned a score in teaching, scholarship, and service. The Department Head's evaluation is based on classroom observations, student evaluations of instruction, the formative evaluation from the DPTC, and a review of each faculty member's portfolio. The Department Head meets with each faculty member to review the evaluation and to discuss plans for the following year. Particular attention is given to any remedial suggestions. The Department Head's summative evaluation and the DPTC's formative evaluation are forwarded to the Dean and then to the Vice President for Academic Affairs.

During a full-time probationary faculty member's third-year, the Department Head writes a more extensive evaluation, which is informed by advice from the DPTC, regarding the individual faculty member's progress toward tenure. The Department Head's meeting to review the third-year evaluation focuses on any actions needed to increase the possibility of tenure approval.

Applications for tenure or promotion are presented to the DPTC along with a full portfolio covering teaching, advising, scholarship, and service. The DPTC votes on the application and shares the results of their vote with the faculty member and the Department Head. The Department Head's recommendation is shared with the faculty member and forwarded to the Dean of the College of Arts and Humanities. The Dean's recommendation is shared with the faculty member and forwarded to the University Promotion and Tenure Committee (UPTC). The UPTC's recommendation is shared with the faculty member and forwarded to the Vice President for Academic Affairs. The Vice President's recommendation is shared with the faculty member and forwarded to the President. If the President's recommendation is positive, it is presented to the Board of Trustees for the final decision.

4. **Provide average number of courses and number of credit hours taught for full-time faculty for current academic year.**

Full-time graduate faculty teach a three-three load. Faculty teaching undergraduate courses teach a four-four load. Teaching in the summer is optional for all faculty. The Program Director receives a course release for administrative duties. Independent study courses and Theses count as service and are not reflected in the teaching loads.

*Table 3.4.1: Graduate Faculty Teaching Loads 2019-2020 Academic Year*

| Instructor<br>Administration/Service | Summer 2019 | Fall 2019 | Spring 2020 | Total |
|---|---|---|---|---|
| Gina Kraft<br>Program Director | none | 9 hours<br>2 courses | 12 hours<br>3 courses | 21 hours<br>5 courses |
| Michael Waller | 6 hours<br>2 courses | 6 hours<br>2 courses | 3 hours<br>1 course | 15 hours<br>5 courses |
| John O'Connor | none | none | 3 hours<br>1 course | 3 hours<br>1 course |

**Program Resources**

1. **Describe the institutional support available for faculty development in teaching, research, and service.**

   Arkansas Tech provides several professional development opportunities for its faculty and staff in fulfillment of its mission as a teaching university. Foremost, there is the Center for

   Excellence in Teaching and Learning (CETL), which promotes student success through a culture of excellence in teaching and learning. The mission of CETL is to encourage, support, and enhance teaching effectiveness. CETL fosters faculty growth through active sharing of best practices. CETL supports excellence in teaching and learning by providing sustained faculty and staff development opportunities, through workshops, seminars, teleconferences, videos, technology training, and consulting. CETL conducts and/or sponsors university-wide professional development days at the beginning and/or end of every semester, as well as numerous voluntary activities throughout the semester. Such activities are open to all ATU faculty, staff, and administrators, regardless of campus and scope of job responsibilities. Faculty who participate in specific programming with regards to diversity and inclusion in the classroom or faculty and staff well-being can earn certificates recognizing their commitment to professional improvement. Faculty are surveyed each year to determine their professional development needs and the scheduled programming reflects those needs.

   The Office of Sponsored Programs and University Initiatives (OSPUI) supports Arkansas Tech University faculty and staff in securing external funding for research and collaboration projects. OSPUI also supervises the distribution of University professional development funds. Arkansas Tech provides resources for professional development through 1) university-wide funding programs (the Professional Development Grant, the Faculty Research Grant, the Undergraduate Research Grant, and Summer Faculty Fellowships), 2) funding available from the College of Education, and 3) funding available from the Department of Health and Physical Education. Below each funding source is discussed, explaining the level of funds available, as well as whether the funds are for teaching, research, and/or service.

   <u>University-wide Funding Programs</u>

   ATU's university-wide funding programs are described in the *Faculty Handbook* (pp. 59-64).

   <u>ATU Faculty Research Fund</u> Each year the University allocates funds to stimulate activity in research through mini-grants for small or pilot research projects. The amount of $2,000 has been designated as the maximum amount per project. Applications must describe the project in detail, identifying the problem and purpose of the study and specifying separately the amounts requested for equipment, travel, materials, clerical or laboratory assistance, and, when applicable, reduction of teaching load, with an explanation of each item of expenditure. Plans for dissemination of the results are to be included. Applications may be submitted at any time, but a project proposing relief from teaching duties for a semester or more must be submitted in time for committee action, at least six months in advance of the effective date.

   *Applications should be submitted to the Office of Sponsored Programs for subsequent transmittal to the Professional Development Committee. The committee reviews all applications

and submits to the Vice President for Academic Affairs those it recommends for approval in whole or in part. Expenditure of funds is processed through the Business Office according to established purchasing and accounting procedures. All equipment purchased through a faculty research allocation becomes the property of the University for instructional use by the faculty member's department upon completion of the project. The terminal report, including findings and data, is to be submitted within twelve months of project completion or upon termination of employment.

Guidelines describing proposal development and evaluation procedures are available on the ATU website at http://research.atu.edu. Click on the Faculty Research link.

Sponsored Programs and Projects Sponsored research projects and grants are coordinated through the academic units. Information to assist in the research process is available at http://research.atu.edu. To establish an orderly procedure for handling the increasing number of University projects financed in part or in whole by outside agencies, the Board of Trustees has approved the following policies:

> All projects for institutes, workshops, or research contracts and grants, financed in part or in whole by funds from outside agencies, shall be cleared through normal administrative channels prior to the initiation of a proposal. In general, those projects are encouraged which have their inception in the interests of individual faculty members or groups of faculty members working within the framework of the overall instructional purposes of their department or college.
>
> The preparation of a proposal, after preliminary institutional approval of the project, is the responsibility of the staff member or members initiating the project. Normally, the individual with primary responsibility for drafting the proposal will be the person designated as supervisor or director of the project if the grant should be obtained. Resources to assist in preparing a grant proposal are available at http://www.atu.edu/research/grantsmanship.php.*Revised 8/1/18
>
> When a proposal is in final form, it will be submitted for review and final approval by the appropriate Department Head, College Dean, and Vice President for Academic Affairs. The proposal is submitted to the contracting officer for the University (Vice President for Administration and Finance) for approval of the budget. After approval by the Vice President for Administration and Finance, the proposal is forwarded to the Vice President for Academic Affairs and the President for approval. Appropriate forms for securing signatures are available in the Office of Academic Affairs.
>
> In proportion to the amount of an individual's time to be devoted to a contract involving outside funds, the staff member is to be relieved of other duties during any period of obligated full-time service to the University. Compensation for contracts or grants must be approved by the Board of Trustees. If, however, a part or all of the individual's duties under a project are to be performed during any part of the summer, when a teaching contract is optional, the University will execute a separate contract for his/her services at an appropriate salary. A staff member under a twelve month contract may receive

additional compensation only for any part of the services which may fall within his/her normal vacation time.

Any deviation from the above policies shall require the specific approval of the Board of Trustees.

Faculty Development Grants Each year the University allocates funds for faculty development activities in each college budgets. These funds are coordinated through the various academic units. Applications for faculty development grants should include information on how the proposal correlates to institutional goals, priorities, and constituencies. Some of the items eligible for funding include (but are not limited to):

- Travel to professional conferences for the purpose of making a presentation or serving in a significant official capacity.

- Travel to professional conferences for the purpose of updating discipline-specific knowledge or other similar activity.

Applications, along with supporting documentation, should be submitted by the faculty member to his or her department head for initial review. The department head reviews the proposal and forwards the request, along with the recommendation, to the dean. The dean convenes the College Faculty Development Grant Committee to evaluate all proposals and make a recommendation to the dean. The dean informs the department head of the decision.

More detailed guidelines describing the Faculty Development Grant request procedure as well as the evaluation criteria and grant limitations are available in college/departmental offices.

Student Interdisciplinary Research Grant Arkansas Tech University awards up to three Student Interdisciplinary Research Grants to enhance efforts among departments and students for professional growth and development. These grants support faculty and student initiatives across all disciplines. Please see the link at http://research.atu.eduand click on "Student Interdisciplinary Research Grants."

Professional Development Grants The University has established a fund to provide additional faculty development opportunities beyond those provided by the colleges. The Professional Development Grant funds are administered by the Professional Development Committee. Please see the link at http://research.atu.eduand click on "Professional Development."

Professional Societies The University supports membership in professional organizations. Each college is allocated funds to pay for transportation, lodging, meals, and registration fees of faculty members to attend national, state, and regional professional meetings. College Deans are responsible for the authorization of travel allocated to their college.

Undergraduate Research To promote collaborative faculty and student research activities, the University has established the Undergraduate Research fund. Please see additional information at http://research.atu.eduand click on "Undergraduate Research".

Sabbatical Assignment The sabbatical assignment is a benefit available to outstanding, tenured professors at Arkansas Tech University, to support their ability to engage in research, scholarship, artistic and creative pursuits. The purpose of the sabbatical assignment is to promote professional growth of faculty members, better teaching, and the overall intellectual environment of the University. Sabbatical assignments are not for the purpose of obtaining additional course work or a terminal degree.

Summer Faculty Fellowships As an aid in the professional growth of the faculty, the Board of Trustees has authorized the annual award of a limited number of faculty fellowships for summer study and for other faculty development activities, as recommended by appropriate academic administrators, that would enhance the effectiveness of the faculty member. Generally, the amount for each fellowship will be equivalent to the salary which the grantee would have received for teaching one summer term. The fellowship award becomes an integral part of the faculty member's contractual agreement with the University.

On-Campus Study Faculty members may enroll for credit or for audit, at no cost, in undergraduate and graduate courses. Procedures for utilizing this aid for on-campus study are listed in the "Faculty Benefits and Privileges" section of this handbook. A faculty member may participate in the learning activities of classes offered through class visitation, upon approval of the class instructor.

Other Opportunities for Professional Growth and Development Requests of funding for developmental activities not listed in this section and for activities requiring support in excess of that available through departmental budgets should be made in consultation with the Department Head/Dean to determine the appropriate method of application.

Funding from the College of Education

The College of Education currently provides $250 per COE faculty member. Requests for funding using this $250 are due to be turned into the Dean's Office by March 1. After that point any remaining funds will be available to faculty through a competitive bid process. A committee reviews applications and determines the awards for the remaining funds.

In previous years, each COE faculty member was initially given $500. The process stayed the same in terms of the competitive bid process.

Funding from the Department of Health and Physical Education

The Department of Health and Physical Education had been making efforts to support the growth and development of its faculty. In 2018/19 and 2019/20, each faculty member received up to $1000 for Professional Development. Since COVID hit in March 2020, the 19/20 funds were absorbed by the pending budget cut. It is unknown at this time when the funding will be made available again.

2. **Describe the professional development of full-time program faculty over the past two years including the institutional financial support provided to faculty for the activities**.

Dr. Kraft received a professional development grant in 2019 to allow her to attend the SHAPE National Convention to present 2 research posters and 1 roundtable. However, this conference was cancelled due to COVID-19.

In 2018, she received a professional development grant to present a research poster at the National Strength and Conditioning Association's National Conference. She attended numerous sessions at this conference as a way to continue her professional education.

Additionally, she faithfully completes continuing education to maintain her Athletic Training certification and her Certified Strength and Conditioning Specialist credential, with distinction.

She regularly attends the university sponsored professional development activities and has participated in a book club, sponsored by the Center for Excellence in Teaching and Learning, on *What the Best College Teachers Do* by Ken Bain.

**3. Provide the annual library budge for the program or describe how library resources are provided for the program.**

The Strength and Conditioning Studies program shares a library budget with the Health and Physical Education department. The budget totals $575 for the 2020-21 fiscal year, after cuts have been made. This is not really a negative as the program relies more on journals and databases than on book purchases.

The library's overall budget for databases is well over $300k. This is not specifically divided up between departments or programs, but it is used to maximize database access, journal subscriptions, as well as providing services like access to e-books and RefWorks. Additionally, interlibrary loan is a way to increase access to materials outside the university library.

**4. Describe the availability, adequacy, and accessibility of campus resources (research, library, instructional support, instructional technology, etc.).**

***Pendergraft Library and Technology Center.*** Arkansas Tech subscribes to over 300 databases, with an annual investment of over $300,000 to allow students, faculty, and staff to find the most appropriate, current, and scholarly information for their studies. These databases include Academic Search Complete, CINAHL Complete, Consumer Health Complete (EBSCOhost), EBSCOhost, HealthSource: Nursing/Academic Edition, MEDLINE, Physical Therapy and Sports Medicine (Gale OneFile), and SPORTDiscus with full-text. Through the databases, the library offers access to over 97,000 electronic journals.

The Library houses over 1200 journals in microfiche and microfilm format, and houses over 5000 monographs (books, proceedings, reports, articles most of which are state and government documents) in microfiche and microfilm format. In print format, the library contains over 190,000 bound volumes (books and journals) and currently subscribes to over 100 print journals.

The Tech Library is a selective U.S. and Arkansas documents depository and houses over 110,000 related documents. These items are cataloged and shelved in a separate collection. The library is a member of AMIGOS/OCLC, a resource-sharing network and regional broker of international bibliographic data and information services. Professional librarians,

paraprofessional staff, and various part-time employees provide assistance in the retrieval and use of materials. Pendergraft Library is open 102 hours per week except between semesters and during holidays. The facility includes a variety of computer labs (both instructional and open use), a music/multimedia lab, a distance learning classroom, a large conference room, breakout/meeting rooms, group study rooms, satellite downlink, cable TV connections, publicly accessible computers, several computer labs, and access to the Tech wireless network.

Additionally, the Tech Library employs a reference and instruction librarian. Anyone who wishes to request instruction through the library can do so by calling or using the request on the Faculty Resources Guide. The library also provides subject library liaisons for every department on campus. Departments work with their library liaison to assure that their resource and instruction needs are met.

The Tech Library provides virtual reference where students can get help off campus or on until 11pm Sun-Thurs and shorter hours Friday & Saturday.

***Computer Labs.*** Arkansas Tech has 54 computer labs on campus with a total of 1,267 computers. Of those, 6 labs are open to students during all normal university hours with a total of 181 computers. In addition, 47 of the 54 computer labs are designated for class use; they have a total of 1,061 computers and are open to students to use when classes are not in session.

Wired network and internet access is available to all faculty, students, and staff. Wireless access is widely available in academic buildings, most administrative buildings, and all residence hall lobby areas. Computer Services interacts with faculty, staff and students on a daily basis to ensure the continuity of service. The Campus Support Center was established in the Ross Pendergraft Library to facilitate support for all parties through a human contact, utilizing a central phone number, email address, and physical location.

Arkansas Tech utilizes the Blackboard Course Management System for content delivery in all web-based classes. In addition, many on-campus courses also use Blackboard to supplement material provided in the classrooms and laboratories.

***Tutoring Services.*** The APEX Tutoring Center at Arkansas Tech offers free, virtual tutoring to students in over fifty courses, with an emphasis on Math and General Ed courses (https://www.atu.edu/tutoring/):

• The center is open Sunday through Thursday from 4-8 p.m.

• The center currently has 21 tutors, all of whom have a cumulative GPA of 3.0 or over (half of our current tutors sport a 4.0 GPA) – having a GPA of 3.0 is a requirement for center tutors, as well as being in good standing and being currently enrolled. The program is overseen by the APEX Center Director, and two graduate assistants help to supervise the tutors during the times the center is open to students.

• The Director holds a tutor training session at the beginning of each semester, the criteria of which accords with the standards of the College Reading and Learning Association (CRLA), which certifies APEX Center tutors.

In addition to the APEX Center, there is the English Department's Writing Lab, which is currently online only. Also, the Math department has a virtual Math Help Lab from 10 a.m. to 4 p.m. Monday through Thursday. At this time, the Biology and Accounting departments do no offer tutoring in their respective areas (in the pre-COVID era, both departments employed student tutors).

The APEX Center is oriented towards undergraduate students; consequently, all of our tutors are undergrads, several juniors and seniors. The center does not offer tutoring for graduate classes, though graduate students may request general guidance regarding standardized tests. In these cases, the APEX Director would work with the student. Regarding papers, the director is conversant with MLA and APA formats, and could help a grad student in either area. The writing lab also provides assistance for graduate students in grammar and writing style.

***Classrooms.*** The classrooms in the Hull building are equipped with overhead projection system and webcams. This allows classes to be taught synchronously face-to-face and online. One of the classrooms is equipped with a Smart Board as well. The equipment by classroom is as follows:

- Room 111 – PC, Projector/screen, Webcam, DVD/VCR
- Room 115 – PC, BYOD (AppleTV), SmartBoard, PTZ camera coming soon, Webcam, DocCam (Elmo), DVD/VCR
- Room 119 – PC Projector/screen, Webcam, TV Cart
- Room 121 – PC, Projector/screen, Webcam, DVD/VCR
- Room 127 – TECH FIT
- Room 132 – PC, Projector/screen, PTZ camera coming soon, Webcam, DVD/VCR, Extron push-button room controller
- Room 133 – PC, Projector/screen, Webcam, DVD/VCR
- Room 134 – PC, SmartBoard, PTZ camera coming soon, Webcam, Smart Slate, DVD/VCR, Lecture capture camera
- Room 135 – PC, Projector/screen, PTZ camera coming soon, Webcam, DVD/VCR

***Lab Spaces and TechFit.*** There are three lab spaces in the Hull building that are utilized by the Strength and Conditioning Studies program. The Human Performance Lab contains:

- Burdick EK-8 ECG machine
- Cosmed Quark CPET metabolic cart
- Biodex isokinetic machine – upgraded software in fall 2020
- Noraxon EMG system
- Trigno wireless EMG system
- 7 Monark bicycle ergometers, with one being a new LC7TT ergometer
- Trackmaster TMX 425C treadmill
- 6 Lange skinfold calipers
- 4 OMRON handheld bioelectrical impedance devices
- Futrex 5000 Bodyfat Analyzer
- Futrex 5000-A Bodyfat Analyzer
- Tanita DC-OU bioelectrical impedance scale
- Nova Biomedical Lactate Plus

- Lafayette Instruments 16020 IRF/E Stabilometer
- 1 iWorx Teaching Assistant kit
- Y Balance kit
- FMS Test kit
- 10 Polar RX 400 Heart Rate Monitors
- Massage/Examination table
- 60 inch AQUOS LED Smart TV

The Underwater Weighing Lab houses the underwater weighing tank and a shower/changing space.

The Strength and Conditioning Lab was made possible by the loan of equipment from Dr. Mike Waller. Equipment owned by him is denoted by (MW). The lab holds the following equipment:

- Weightlifting Platforms Qty. = 4 (MW constructed)
- Jerk Table (MW constructed)
- Pulling Blocks Qty. = 4 pairs. (MW constructed)
- Pendlay Weightlifting 20 kg & 15 kg Bar OSO Collars + Yellow (MW)
- Hampton 6' bar 35 lbs. (MW)
- Olympic Bars 45 lbs. Qty. = 3 + Iron Collars, 2 Spring Collars, Muscle Clamps (MW)
- Rogue Weightlifting Bars 45 lbs. & 35 lbs. + Rogue HG Collars (ATU)
- Rouge Bumper Plates 10 lbs. – 25 lbs. (ATU)
- Kraiburg, Rage, and York rubber bumper plates 10 kg./25 lbs. – 45 lbs. (MW)
- Pendlay Bumper Plates 25 lbs. – 55 lbs. & Horizontal Rack (MW)
- Cast Iron Plates 2.5 lbs./1.25 kg – 45 lbs./20 kg. + 2 A-Frame Racks (MW)
- Rubber Encased Plates 2.5 lbs. – 45 lbs. (ATU)
- Power Skater by Power Athletics (MW)
- Paramount Back Extension (MW)
- Squat Stands Qty. = 2 (MW)
- Half-Rack (ATU)
- Flat Bench Press (MW)
- Heavy Bag and Boxing Gear (MW)
- Agility Ladders by Power Systems (ATU)
- Stackable 4" Boxes Qty. = 10 (ATU)
- Metal Plyometric Boxes (ATU)
- Vertical Plate Rack and 2 Qty. A-frame weight racks (MW)
- PVC constructed Hurdles and Cones (MW)
- Mini-hurdles 6" (ATU)
- Track Hurdles (ATU)
- Medicine Balls 6-8 lbs. (ATU)
- Medicine Balls with Rope (MW)
- PVC Technique Sticks (MW + ATU 3)
- Vertical Jump Tube Resisted (ATU)
- DOT Agility Mat (ATU)
- Battling Rope (MW)
- Sprint Resistor (MW)

- Adjustable Dumbbell plus collars (MW)
- Rubber plyometric runway (MW)
- Elastic bands/tubes and Chains (MW)

TechFit is a classroom, first and foremost, but it is a workout facility that houses the following equipment:

- Legend Belt Squat Machine
- Legend Preacher Curl
- Legend Competition Flat Bench Press
- Legend Adjustable Flat-Incline Benches Qty. = 4
- Iron Range Dual Side-by-Side Half Rack
- Iron Range Glute-Ham-Back Extension
- 130 lbs. Tire for flipping and dragging
- Matrix Machine Calf Press
- Matrix Machine Hip Adduction
- Matrix Machine Hip Abduction
- Matrix Machine Leg Extension
- Matrix Machine Leg Press
- Matrix Machine Seated Leg Curl
- Matrix Machine Prone Leg Curl
- Matrix Machine Rotary Torso
- Matrix Machine Back Extension
- Matrix Machine Abdominal
- Matrix Machine Rotary Hip
- Matrix Machine Rear Delt/Pec Fly
- Matrix Machine Diverging Lat Pulldown
- Matrix Machine Seated Dip
- Matrix Machine Arm Curl
- Matrix Machine Converging Shoulder Press
- Matrix Machine Diverging Seated Row
- Matrix Machine Converging Chest Press
- Matrix Machine Lateral Raise
- Matrix Machine Dip Assist/Chin Assist
- Matrix Flat Bench Press
- Matrix Incline Bench Press
- Matrix Smith Machine
- Matrix Functional Trainer Qty. = 2
- Assault Runners Qty. = 4
- Assault Bikes Qty. = 2
- Concept II Rowers Qty. = 2
- Precor Treadmills Qty. = 5
- Precor Ellipticals Qty. = 5
- Stepmills Qty. = 2
- Matrix Recumbent Bikes Qty. = 3

- 6’ x 8’ Weightlifting Platforms + Pyrros 20 kg WL bars Qty. = 2 , Pyrros 15 kg WL bar
- Bumper Plates 25 lbs. – 55 lbs.
- CAP Rubber encased plates 2.5 lbs. – 45 lbs.
- Dumbbells 5-100 lbs. pairs
- Kettlebells 8 lbs. – 80 lbs.
- Medicine Balls 4 lbs. – 20 lbs.
- Battling Rope Qty. = 2
- Foam Rollers Qty. = 6
- Resistance Bands

**5. Provide a list of program equipment purchases for the past three years.**

Purchases by the department that benefit the Strength and Conditioning Studies program are listed below:

| |
|---|
| *2017-18 Academic Year* |
| Precor Treadmill for TechFit |
| |
| *2018-19 Academic Year* |
| Accell Bar Storage for TechFit |
| Accell Stand Alone 6x8x3 Platform for TechFit |
| Edge Horizontal Rolling Bumper Storag for TechFit |
| Bumper Plates (25-55 lb) for TechFit |
| Rubber Grip Plate (25 and 45 lb) for TechFit |
| Pyros Bars (25 and 28 mm) for TechFit |
| Concept 2 Model D Rowers (2) for TechFit |
| Assualt Air Bikes (2) for TechFit |
| Plyo Box Set for TechFit |
| Side by Side Half Rack for TechFit |
| Supine Bench for TechFit |

| |
|---|
| *2019-20 Academic Year* |
| Assault Air Runner Treadmills (4) for TechFit |
| Ironrabnge 20 kg Power Bar for TechFit |
| Evloution 2.0 Medicine 6-Ball Pack with Rack for TechFit |
| 7 ft Axle Bar for TechFit |
| Cambered "Safety Sqaut" Bar for TechFit |
| Bufallo Bar for TechFit |
| Fortify Dip Belt for TechFit |
| Tumblepro Mat 6'X12' for TechFit |
| Brawnbands for TechFit |
| Exercise Mats for TechFit |
| 45 lb Rubber Grip Plates (6) |
| 10 lb Rubber Grip Plates (12) |
| 5 lb Rubber Grip Plates (12) |
| Belt Squat |
| Preacher Curl |
| Competition Flat Bench Press |
| Horizontal Bumper Rack |
| 60kg/130 lbs TIYR Blue with Handles |
| Massage/Examination Tabel for Human Performance Lab |
| Hoses for Metabolic Cart in Human Performance Lab |
| $CO_2$ Scrubber for Metabolic Cart in Human Performance Lab |
| Calibration Gas tank for Metabolic Cart in Human Performance Lab |
| Upgrade to Biodex in Human Performance Lab |
| Service Plan for Biodex in Human Performance Lab |
| |
| *2020-21 Academic Year* |
| No purchases made. |

**Instruction via Distance Technology**

Only one required course in the degree program is offered fully online. This is PE 6043 Motor Learning and Control. Sometimes elective courses are offered online, as is the case with PE 6063 Current Issues in Coaching & Athletics during spring 2021. None of the other courses are offered with greater than 50% of their content online. All courses utilize Blackboard regardless of how much of the course is online.

COVID-19 has impacted the method of course delivery. During the pandemic all courses have been taught synchronously via face-to-face and online using WebEx.

Professors who teach online courses are strongly encouraged by the university to complete a course entitled Transition to Teaching Online provided by the university's eTech department. This is a 6 unit course designed to ensure a base level of quality for online instruction. Dr. Kraft has completed this program, and Dr. O'Connor has begun it.

**Majors/Declared Students**

1. **State the number undergraduate/graduate majors/declared students in each degree program under review for the past three years.**

   Enrollment has been fairly steady or has slightly declined over the past three academic years.

| Semester | Number of Students |
|---|---|
| Spring 2021 | 15 |
| Fall 2020 | 15 |
| Summer 2020 | 9 |
| Spring 2020 | 17 |
| Fall 2019 | 15 |
| Summer 2019 | 8 |
| Spring 2019 | 19 |
| Fall 2018 | 21 |
| Summer 2018 | 8 |
| Spring 2018 | 20 |
| Fall 2017 | 22 |

2. **Describe strategies to recruit, retain, and graduate students.**

   Efforts to recruit have largely been placed on the department. The program has no budget for this, and the department has minimal funds available. As such, much of the recruitment has been done by the Program Director. She has used departmental funds and Professional Development funds from the College of Education to attend NSCA state conventions in the surrounding states to promote the ATU policy of offering in-state tuition to any student in states touching Arkansas. However, this is a costly (monetarily and time) means of recruiting.

   To expand recruitment efforts, the Program Director is working with the Graduate College to conduct a Facebook Live session early in February 2021 to promote the program. The success of this event may impact the efforts in recruitment moving forward.

   Retention efforts are made by the Program Director and the professors teaching in the program. Ensuring that students are making adequate progress in classes and checking in with them when they are struggling are the primary foci of the retention efforts. The Program Director is solely responsible for advising and enrolling students for the next semester. Ensuring that they are making progress toward graduation is a part of the advising process. The Program Director works with students on probation due to grades to help get them back on track and help them graduate.

   Most students who begin the program graduate. A few have started who did not graduate. Of these, most of them were not committed to the program and their motives for beginning it were unclear. The Program Director reaches out to all students who have failed to enroll in a semester for at least 2 semesters after that time to give them opportunity to return to the program.

3. **Provide the number of program graduates over the past three years.**

The number of graduates has fluctuated over the past three years, ranging from 1 to 7 graduates in a semester. The program does not normally graduate students over the summer.

| Semester | Number of Students |
|---|---|
| Fall 2020 | 1 |
| Spring 2020 | 5 |
| Fall 2019 | 2 |
| Spring 2019 | 7 |
| Fall 2018 | 2 |
| Summer 2018 | 1 |
| Spring 2018 | 6 |
| Fall 2017 | 4 |

**Program Assessment**

1. **Describe the program assessment process and provide outcomes data (standardized entrance/placement test results, exit test results, etc.).**

   The assessment process has changed since 2018. The assessment process left to the current program director was not optimal and consisted primarily of a short, 30 question "exam" completed at the end of the SCS 6103 Professional Project course. This was not adequate to evaluate student learning through the program. In 2019, the Program Director began the process of evaluating and updating the assessment process.

   Program objectives were updated to the following:

   1. Students will acquire the necessary scientific knowledge to be effective strength coaches.
   2. Students will acquire the necessary practical knowledge and skills to be effective strength coaches.
   3. Students will demonstrate combined scientific knowledge & practical knowledge/skills in a successful research/creative project or internship.

   These were mapped to various courses and course assignments to allow for a stronger assessment plan. Each is evaluated in the semester courses are taught, as not all courses are taught every semester. This is expressed in more detail in the 2019-2020 Assessment Report located in Appendix C.

   This new assessment plan will be repeated annually.

2. **Describe the program/major exit or capstone requirements.**

   Students complete the program by completing SCS 6103 Professional Project. This course has 3 options for completion: 1) internship, 2) research project, or 3) creative project. All options are proposed to the Graduate Committee at the end of the semester prior to being enrolled in the course. The Graduate Committee consists of all faculty currently teaching in the program. Approval is granted based on consensus of the committee.

   The internship must be a minimum of 30 hours a week for a minimum of 12 weeks and must be supervised by an NSCA CSCS credentialed coach. Preferred internship locations have an internship curriculum established. However, this is not a requirement, and students who obtain internships at sites without an established curriculum work with the Program Director to create an appropriate curriculum alternative. This alternative is approved by the Graduate Committee prior to initiation of the internship.

   Research Projects must be of sufficient depth and breadth to be published at the end of the project. However, publication is not a direct requirement. The project is written with an eye toward journal publication rather than as a thesis.

Creative Projects are not well-defined to allow ample creativity. However, the scope of the project must be sufficient to warrant being a capstone project. The depth and breadth of the project must be approved by the committee.

All students present their experience at the completion of the project to share what they have learned. This presentation is a required component of the SCS 6103 course.

Alternatively, students who anticipate going on to complete a doctoral degree may substitute a thesis for the SCS 6103 Professional Project class.

3. **Provide information on how teaching is evaluated, the use of student evaluations, and how the results have affected the curriculum.**

   The University provides course evaluations that address the faculty performance in the class. The Department provides course evaluations that address the degree to which the course objectives are met. These are conducted toward the end of each semester. Faculty receive results shortly after the semester ends. It is incumbent on each faculty member to read and address the course evaluations. However, the department head meets with the faculty member annually. Part of that meeting addresses student evaluations and ways to improve or utilize the information provided therein.

4. **Provide transfer information for major/declared students including the receiving institutions for transfer and programs of study.**

   This program rarely gets transfer students. Any transfer students are addressed on a case-by-case basis. Courses accepted are evaluated individually, and syllabi are generally requested prior to a decision being made. A maximum of 6 credit hours may be transferred into the degree. During the current Program Director's tenure, there has only be 1 student who has transferred into the program.

   Transfers out of the program are equally as rare. Only 1 student has transferred out during this same time-period.

5. **Provide information for program graduates continuing their education by entering graduate school or by performing volunteer service.**

   As of yet, no data has been provided related to students continuing on to obtain terminal degrees. Two graduates opted to go to nursing school after completion of the degree. Most students do not pursue terminal degrees. On a graduate survey, one student indicated a desire to pursue a terminal degree.

6. **Provide aggregate results of student/alumni/employer satisfaction surveys.**

   A survey went out to graduates of the program in the fall of 2020 (a copy of the survey is located in Appendix D). This survey received 15 responses. Of these only 4 graduates claimed to be working in the field of strength and conditioning. Closer inspection of the current work situation

revealed that 8 graduates were working in related fields, such as sport coaching or physical therapy.

Additionally, 6 of the 15 students obtained their CSCS credential from the NSCA. Only 2 had that credential upon beginning the master's degree. Of the 4 who earned the CSCS credential after completing their master's degree, 3 passed on the first attempt (1 passed on the second attempt).

Two students completed their USAW Level 1 certification during the program or after graduation.

All graduates, except one who expressed a lack of clarity in future goals, expressed a strong desire to coach in strength and conditioning or sport as a future goal.

7. **Describe how the program is aligned with the current job market needs of the state or local communities.**

   The degree is designed to prepare students to become strength coaches. There is some job market for strength coaches locally and in the state if the high school level is considered.

   More high schools are hiring strength coaches now than in the past. While specific data is difficult to find, this is suggested by the formation of the National High School Strength Coaches Association in 2016. In addition, Arkansas now has 10 different districts that have hired strength coaches to either cover some or all of the sports at their schools (per email from contact at Arkansas Activities Association). A decade ago, there were only 1 or 2 such coaches in the state. These factors indicate job growth at the high school level. In turn, this puts pressure on smaller colleges and universities (particularly NAIA, NCAA Division 3 and any Division 2 without strength coaches) to hire said coaches in order to be able to recruit and retain athletes.

   According to the Bureau of Labor statistics, the jobs for coaches and scouts are projected to grow by 12% between 2019 and 2029. This is labeled as "much faster than average" and bodes well for graduates of the Strength and Conditioning Studies program finding jobs after graduation. Although Arkansas is projected to have a slightly slower growth rate of 8%, surrounding states are strong with Louisiana growing at 12.7%, Missouri at 14.5%, Tennessee at 24%, and Texas at 30% (http://www.projectionscentral.com/Projections/LongTerm). It is important to look more regionally for the job market alignment for this degree as Arkansas is a small state with limited opportunities.

8. **Provide job placement information for program graduates including the number of graduates placed in jobs related to the field of study.**

   Refer to question 6 and the results of the Graduate Survey.

**Program Effectiveness (strengths, opportunities)**

1. **List the strengths of the program.**

   The program is designed to be hands-on. This is one of the best strengths of the program. Through the summer classes and the classes like SCS 6013 Measurement and Evaluation, students gain valuable skills necessary to be a strength coach. Dr. Mike Waller is also a strength to the program as he helps guide students to develop their own coaching style and coaching voice. His personal experience coaching comes out as he mentors students and develops them into young coaches.

   The balance of experience between Dr. Waller and Dr. Kraft is also a strength. Dr. Waller has extensive experience in the weight room while Dr. Kraft has much more background with aerobic sports. This allows the two faculty members to provide a well-rounded experience for students.

   The flexibility for degree completion in the SCS 6103 Professional Project is another strength. Students may choose how they prefer to complete the capstone experience for the degree. This allows them to match the experience with their personal goals and current life situation more closely.

2. **List the areas of the program most in need of improvement.**

   There is a huge need for a marketing plan for the program. The Program Director is aware of this and has tried reaching out to the Marketing and Communications (MARCOMM) department; however, little progress has been made. This needs to change in order for the program to grow.

   Another area in need of betterment is the hands-on/practical experiences specific to strength and conditioning outside of the academic space, which can be through the collaboration of local schools, athletic clubs, and conversation with clubs in Little Rock. The addition a sport psychology and sport management courses would enhance the knowledge base of the graduates.

   Finally, the Strength and Conditioning Lab equipment is on loan from Dr. Mike Waller. This is acceptable as long as he remains at ATU. However, the program will lose its primary lab if he leaves the university.

3. **List program improvements accomplished overt the past two years.**

   Dr. Mike Waller became the director for TechFit in late spring of 2018. TechFit is an on-campus fitness facility that is first, and foremost, a classroom. He has worked to improve that space from a general fitness facility that is usable for classes to be a strength and conditioning lab space.

   Additionally, we conducted a usage study of the racquetball courts in 2017-18 and determined that racquetball players would not drastically miss the loss of 1 court. We got permission to convert this court to a Strength and Conditioning Lab, and in the spring of 2019 Dr. Mike Waller loaned personal equipment to the department for the creation of this lab.

4. **Describe planned program improvements, including a timetable and the estimated costs. Identify program improvement priorities.**

   A marketing plan is being addressed by the Program Director during the Spring 2021 semester. As part of this, she collaborated with the Graduate College to complete a Facebook Live event to promote the program at the beginning of February. She plans to work with MARCOMM, if possible and independently if not, to develop a plan. This plan will then begin being implemented in subsequent semesters. At this time, no costs are estimated for this plan.

   The university is currently undergoing budget-based restructuring. If the degree remains active and viable, the HPE Graduate Curriculum Committee will begin evaluating additional tracks and options. This work will begin in late spring 2021. Any new proposals should be presented by the end of the calendar year.

   As new tracks are evaluated, one option is a more online option. If there is a shift to more on-line instruction there will be a mandatory need for hands-on/practical learning experiences because the field is interaction with a person thus there may be an opportunity for a greater immersive experience for future practitioners.

   The addition/replacement of S&C equipment to the laboratory spaces would improve the learning experiences. At this time, there is no specific plan for improving/replacing equipment as budgets have been cut during the COVID-19 pandemic with no indication of when or if they will be restored.

   The priorities for improvement are:

   1. Marketing plan
   2. Degree tracks
   3. Equipment addition/replacement
   4. Renovation of TechFit

**Institutional Review Team**

This document was written by Dr. Gina Kraft. She had input from numerous individuals but compiled the document as a solo adventure.

The document was reviewed by Dr. Rockie Pederson and Dr. Mike Waller prior to submission.

**Appendix A – Course Syllabi**

Required Core Courses (27 hours)

1. PE 6033 Exercise Physiology
2. PE 6043 Motor Learning & Control
3. PE 6053 Biomechanics
4. PE 6083 Research Methods and Statistics
5. SCS 6013 Measurement and Evaluation in Strength and Conditioning
6. SCS 6033 Strength & Conditioning Program Design & Development
7. SCS 6043 Techniques for Development of Hypertrophy, Strength & Power
8. SCS 6053 Techniques for Development of Speed, Agility, Reaction Time & Endurance
9. SCS 6063 Trends in Sports Nutrition & Metabolism

Electives (3 hours)

1. MATH 5173 Advanced Biostatistics
2. PE 6063 Current Issues in Coaching & Athletics
3. PE 6073 Exercise & Sport Behavior
4. PE 6891-3 Independent Study
5. SCS 6023 Scientific Foundations of Strength & Conditioning
6. SCS 6083 Instructional Strategies for Strength Coaches
7. SCS 6093 Exercise Science Seminar

Culminating Experience (3 hours)

1. SCS 6103 Professional Project (could be research, internship, or other approved project)

# PE 6033: Exercise Physiology
# Spring 2021


Instructor: Gina Kraft, PhD, ATC, CSCS
Office: Hull 108 / WebEx https://atu.webex.com/meet/gkraft
Phone: 479-968-0431
Email: gkraft@atu.edu


## Office Hours:
via WebEx at https://atu.webex.com/meet/gkraft
Monday-Thursday from 10:30a.m. - noon or **by appointment**

## Class Time:
Monday 3:00p-6:00p

## Class Location:
Hull 135

## Required Textbook:
Plowman, S. A. and Smith, D. L. (2017). *Exercise physiology for health, fitness, and performance* (5th ed.). Philadelphia, PA: Wolters Kluwer. ISBN: 978-1-4963-2318-7

## Additional Materials:
Calculator
Internet access

## Prerequisites:
Admission to the program OR PE 4033 or equivalent with the grade of B or better, PE 2653, and PE 3663 or approval of department head.

## Catalog Description:
A study of the physiological changes in the human organism which accompany physical exercise and the implication of the changes for physical education.

## Course Description:
Physical education is a broad-based field of study comprised of several disciplines, such as psychology, sociology, philosophy, and physiology. The physical educator should have a sound understanding of the physiological principles of the human organism as they relate to exercise if they are to implement the goals and objectives of their profession.

## Competencies:
1. Discuss bioenergetics and its role in exercise.
2. Demonstrate an understanding of metabolism, metabolic pathways, and the effects of exercise on the controls of metabolism.
3. Discuss pulmonary ventilation and the response of this system during exercise.
4. Demonstrate an understanding of the circulatory system and cardiac function during exercise.
5. Discuss principles and properties of skeletal muscles, as well as their adaptation.
6. Discuss the physiological responses and performance modifications produced by various environmental stimuli.

## Class Format:

The class will consist primarily of lab, lecture, discussion, and activity sessions. Some class periods will utilize group work, in-class activities, and lab type experiences. Students are expected to come to class prepared to participate in class discussions by having read the assigned chapter in the textbook and by completing the online assignment for that chapter. In addition, students dress prepared for physical activity (modesty is expected).

## Attendance:

University Policy states:

> "Regular class attendance is considered essential if students are to receive maximum benefit from any course. Control of class attendance is vested in the teacher, who has the responsibility of defining early in each course his/her standards and procedures. A student accumulating an excessive number of unjustifiable absences in a course may be dropped from the course by the instructor with a grade of 'FE.' A student who is dropped from three courses in a semester for unsatisfactory class attendance may be immediately suspended."

## Academic Dishonesty:

Plagiarism or cheating will not be tolerated. Unless permitted to work in groups, all assignments must be completed individually. The university policy for academic dishonesty will be followed.

## Grading:

| Assignment | Number | Points Each | Assignment Total |
|---|---|---|---|
| Weekly 3-2-1 | 5 | 5 | 25 |
| Peer Teach | 5 | 25 | 125 |
| Labs | 4 | 100 | 400 |
| Weekly Research Articles | 9 | 10 | 90 |
| Sports Analysis | 1 | 200 | 200 |
| Midterm Exam | 1 | 100 | 100 |
| Final Exam | 1 | 50 | 50 |
| Points Total | | | 990 |

| Grading Scale | | | |
|---|---|---|---|
| 891 to | 990 | points | A |
| 792 to | 890.9 | points | B |
| 693 to | 791.9 | points | C |
| 594 to | 692.9 | points | D |
| below | 594 | points | F |

## ASSIGNMENT DESCRIPTIONS:

### Weekly 3-2-1

Each week students will post a response to three questions related to the assigned readings for the week. The questions are as follows:

- What are three (3) things you learned from this week's readings?
- What are two (2) things you would like to know more about from this week's readings?
- What is one (1) thing that confused you about this week's readings?

Use the template in Blackboard to complete the assignment. You may always list more than the requested number of items; however, providing fewer items will result in fewer points. **These are due 30 minutes prior to class time.**

### Peer Teach

Each student will be assigned a section of five different chapters to teach. The student will be provided the publisher's PowerPoint for that section to assist in the preparation for teaching. The PowerPoint MAY BE MODIFIED as you see fit. Anticipate questions that your peers might have and work to address those. Work to explain the information beyond the undergraduate level of understanding.

Grading will be based on:

- Accuracy of the explanations
- Depth of explanations (going beyond the undergraduate level of explanation)

- Use of visual aid (relying on it without simply reading from it)
- Ability to answer questions without referencing the text
- Seamlessness and professionalism of the presentation

## Labs

Four labs will be completed throughout the semester. All students will work together to collect the necessary data. All students will serve as subjects for all labs, unless otherwise specified.

**Each individual** is responsible for turning in a separate lab write-up promptly on the assigned date. Write-ups are not designed to be collaborative. Lab write-ups will be due the week after the lab is completed.

The lab write-up should follow the format of a research article with the following sections:
Introduction
Methods
Results
Discussion

In the **Introduction**, students should introduce the topic being studied and provide basic background information about this topic. Be sure to address the question "Why is this important to measure or to know?" Students will need to reference outside resources (journals, textbooks, etc.) to provide the necessary background.

The **Methods** section should provide a concise set of steps used to collect the data. This should be detailed enough than an outsider could follow the steps and replicate the protocol.

**Results** sections is a listing of the data collected during the lab. Include data from ALL subjects. This should be done in a table even if stated in text.

The **Discussion** section should include a summary of the things learned from the lab activity and provide some conclusion to the paper.

Include a **Works Cited** page at the end. Use APA guidelines for this page as well as for all in-text citations. If you are not familiar with APA, check out https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_style_introduction.html.

These are due by class time on the day they are due.

## Weekly Research Article:

These assignments are designed to help you find research articles to provide background for the various labs and/or the Sports Analysis assignment. Students must find a peer-reviewed research article on a current topic in exercise physiology published in the past five years. Upload a copy of the research article to Blackboard along with a summary of the article. In addition to the summary, include 2 questions generated by reading the study. Begin the assignment with an APA style citation. Use a professional writing style and pay attention to grammar. Summaries should appear as follows (include headings):

**Bibliography (sample)**
Hill, K. M., Whitehead, J. R., & Goodwin, J. K. (2011). Pre-workout carbohydrate supplementation does not affect measures of selfassessed vitality and affect in college swimmers. *Journal Of Sports Science & Medicine*, *10*(3), 478-482.

**Summary** (should be a full page, double spaced and clearly delineate the purpose, methods, and results)

**Questions** (two questions that you have concerning the article)

All Weekly Research Articles are to be posted in Blackboard by class time on the day they are due.

### Sports Analysis

In a group of 2 or 3, you will provide a complete analysis of the requirements for and the best training strategies to enhance each main system of the human body for an assigned sport. The sport will be provided. You will provide a written analysis of the metabolic, cardiovascular-respiratory, neuromuscular-skeletal, and neuroendocrine-immune systems. After addressing each system and the requirements for your given sport, provide training strategies to optimize adaptations for each system. Cite all resources used, including the textbook for the course. A group paper will be submitted (worth 100 points) and a presentation will be made to the class (worth 100 points). Both will be submitted to Blackboard.

The presentation should use a visual aid such as PowerPoint. Attire should be professional for the field and not workout gear. Good presentation etiquette uses minimal text on the screen, avoids reading directly from notes, and makes eye contact with the audience. Please practice your presentation. Do not let the first run through the presentation as a team be in front of the class. This will ensure smoother transitions and, likely, better scores.

### Midterm Exam

The midterm exam will be a combination of multiple choice and essay questions covering chapters 1-15. Students will take the midterm twice. The first attempt is to be completed without any external resources. The second attempt may be completed with the assistance of your textbook and other resources. The second score will be recorded, but you MUST HAVE 2 ATTEMPTS in order to get a score.

### Final Exam

The final exam will consist of bringing snacks to class and reflecting. Reflection will address key things learned in the class as well as strategies for improving the class. Bringing a snack will be worth 10 points. The learning reflection will be worth 20 points, and the class improvement reflection will be worth 20 points

## Alternative Means of Earning Points:

Attend any NSCA, CSCCa, ETSUCC, or other approved conference. Write a summary of each session and include ways that you anticipate incorporating the presented information into your own coaching practice. The length of the summary depends on the length and number of sessions at the conference. For each session, include a minimum of three things you learned during the session. You may earn up to 5 points per hour live events that you physically attend. You may earn up to 2.5 points per hour for any livestream or online event. A maximum of 100 points may earned in this manner. These must be posted no later than April 28 for credit.

## Tentative Schedule:

| Date | Topic and Readings | Assignment |
|---|---|---|
| January 11 | Introduction | |
| January 18 | **Martin Luther King Day Holiday** | |
| January 25 | Chapter 1: The Warm-Up<br>Chapter 2: Energy Production<br>Chapter 3: Anaerobic Metabolism during Exercise | Weekly 3-2-1<br>Research Article 1 |
| February 1 | Chapter 4: Aerobic Metabolism during Exercise<br>Chapter 5: Metabolic Training Principles and Adaptations | Weekly 3-2-1<br>Research Article 2 |
| February 8 | Chapter 6: Nutrition for Fitness and Athletics<br>Chapter 7: Body Composition: Determination and Importance | Weekly 3-2-1<br>Research Article 3<br>Lab 1 |
| February 15 | Chapter 8: Body Composition and Weight Control<br>Chapter 9: Respiration | Weekly 3-2-1<br>Research Article 4 |
| February 22 | Chapter 10: Respiratory Exercise Response, Training Adaptations, and Special Considerations<br>Chapter 11: The Cardiovascular System | Weekly 3-2-1<br>Research Article 5 |
| March 1 | Chapter 12: Cardiovascular Response to Exercise<br>Chapter13: Cardiorespiratory Training Principles and Adaptations | Weekly 3-2-1<br>Research Article 6<br>Lab 2 |
| March 8 | Chapter 14: Thermoregulation<br>Chapter 15: Cardiovascular Disease Risk Factors and Physical Activity | Weekly 3-2-1<br>Research Article 7 |
| March 15 | Midterm Exam | Midterm Exam |
| March 22 | **Spring Break** | |
| March 29 | Chapter 16: Skeletal System<br>Chapter 17: Skeletal Muscle System<br>Chapter 18: Muscular Contraction and Movement | Weekly 3-2-1<br>Research Article 8<br>Lab 3 |
| April 5 | Chapter 19: Muscular Training Principles and Adaptations<br>Chapter 20: Neuromuscular Aspects of Movement | Weekly 3-2-1<br>Research Article 9 |
| April 12 | Chapter 21: Neuroendocrine Control of Exercise<br>Chapter 22: The Immune System, Exercise, Training, and Illness | Weekly 3-2-1<br>Lab 4 |
| April 19 | Sports Analysis Presentations | Weekly 3-2-1<br>Sports Analysis |
| **April 29** | **Final Exam (Thursday, April 29 from 3:30p.m.-5:30p.m.)** | Snack<br>Reflection |

## Bibliography:


Beam, W. C. & Adams, G. M. (2019). *Exercise physiology laboratory manual* (8th ed.). New York, NY: McGraw-Hill.

Brooks, G. A., Fahey, T. D., & Baldwin, K. M. (2005). *Exercise physiology: human bioenergetics and its applications* (4th ed.). New York, NY: McGraw-Hill.

Gardiner, P. F. (2011). *Advanced neuromuscular exercise physiology*. Champaign, IL: Human Kinetics.

Haff, G. G. & Dumke, C. (2019). *Laboratory manual for exercise physiology (2nd ed.)*. Champaign, IL: Human Kinetics.

Haff, G. G. & Triplett, N. T. (Eds.) (2016). *Essentials of strength training and conditioning* (4th ed.). Champaign, IL: Human Kinetics.

McArdle, W. D., Katch, F. I., & Katch, V. L. (2014). *Exercise physiology: nutrition, energy, and human performance* (8th ed.). Philadephia, PA: Wolters Kluwer Health.

Porcari, J. P., Bryant, C. X., & Comana, F. (Eds.). (2015). *Exercise Physiology*. Philadelphia, PA: F. A. Davis Company.


## COVID-19 Information

The Academic Contingency Planning Group was formed by Academic Affairs to plan for the delivery of our curricula in the fall semester with the uncertainties that have been the hallmark of the COVID pandemic thus far. Given the university remains in Phase 1 the guidance applies to the opening of the spring term.

In order to help keep our ATU community safe, healthy, and to prevent the spread of COVID-19, students must follow several steps:

1. Masks must be worn by all students in public spaces, including classrooms and laboratories. Any student showing up for class without a mask will be given the opportunity to retrieve one. Entry into classrooms and laboratories without a mask will be prohibited.

2. All students are required to participate in a daily health self-screen. For students commuting to campus, please complete before coming to campus. For residential students, please complete each day before leaving your residence hall.

3. All students must maintain at least 6 feet of distance from every person present in all instructional spaces used in this course (classrooms, laboratories, etc.)

4. Any student who tests positive for COVID-19 is asked to self-report to the ATU Health and Wellness Center by calling (479) 968-0329 or sending e-mail to hwc@atu.edu. Doing so will allow the university to communicate directly with others who might have been exposed to the virus and take any appropriate cleaning and sanitizing measures.

   Students are expected to abide by the above steps in accordance with the Student Handbook section on Classroom Behavior.

   For more information about ATU COVID-19 policies, please refer to the following ATU guidance documents.

ATU Pandemic Frameworks (https://www.atu.edu/docs/Pandemic%20Framework-2020.pdf)

ATU COVID-19 Student Daily Testing (https://www.atu.edu/pandemicrecovery/student-health-screening.php)

In addition, all faculty and students should familiarize themselves with the section of the Student Handbook related to classroom behavior to understand the process by which they can address non-adherence to the University policies described in the syllabus. The excerpt below is from the 2019-2020 Student Handbook:

**3. Classroom Behavior**

Each member of the Arkansas Tech University community is obliged to conduct her/himself in a non-disruptive manner in the classroom. If a student is being disruptive, the instructor will address the situation, discussing behavioral expectations moving forward, and emphasize possible consequences for failing to comply. If the disruptive behavior persists, the student may be suspended on an interim basis from the class. Instructors may report excessive and/or repeated disruptive behavior through the Procedures for Addressing Violations of Academic Integrity and Classroom Behavior. This process includes an appeals process students may use to challenge perceived violations or excessive penalties. Students who exhibit disruptive behavior may also be referred to the Department of Student Conduct (see Article III, Section C of the Arkansas Tech University Student Handbook).

If a classroom incident constitutes an emergency (e.g., any immediate threat to life and/or property) and requires an immediate response from police, fire or emergency medical services, please call 911.

## Safety Statement:

Students are required to follow instructor rules, comply with instructions given, and utilize correctly all safety equipment or procedures provided or indicated.

## Title IX:

Arkansas Tech University does not discriminate on the basis of color, sex, sexual orientation, gender identity, race, age, national origin, religion, veteran status, genetic information, or disability in any of our practices, policies, or procedures. If you have experienced any form of discrimination or harassment, including sexual misconduct (e.g. sexual assault, sexual harassment, stalking, domestic or dating violence), we encourage you to report this to the institution. If you report such an incident of misconduct to a faculty or staff member, they are required by law to notify Arkansas Tech University's Title IX Coordinator and share the basic fact of your experience. The Title IX Coordinator will then be available to assist you in understanding all of your options and in connecting you with all possible resources on and off campus. For more information please visit: http://www.atu.edu/titleix/index.php.

Arkansas Tech University adheres to the requirements of the Americans with Disabilities Act in order to prevent barriers to academic accessibility. If you need an accommodation due to a disability, please contact the ATU Office of Disability Services, located in Doc Bryan Student Center, Suite 171, or visit http://www.atu.edu/disabilities/index.php.

# PE 6043 Psychology of Motor Learning

**Instructor Information**

Name: John O'Connor, Ph.D., CAPE, CARSS

Office: Hull 103
Phone: 479-964-0583 ext.4906
E-mail: joconnor1@atu.edu

**Prerequisites:**

Admission to Graduate School and continued good standing in the Graduate Program

**Catalog Description:**

Provides an understanding of psychological principles involved in motor performance.

**Course Description:**

Students will learn the major principles underlying the acquisition of motor skills and how control of skilled movements is gained, maintained, and adapted. This course covers the various way that people learn to move, learn skilled actions, and how the principles of motor performance and learning can be useful in teaching, coaching, and rehabilitation.

**Required Text:**

Schmidt, R. A., & Lee, T. D. (2020). *Motor learning and performance: From principles to application* (6th Ed.). Champaign, IL: Human Kinetics.

**Justification for the Course**

This course is justified in that it meets part of the knowledge base for students of graduate physical education. The requirements meet in part, the guidelines of the Society of Health and Physical Educators, which is the certifying society for physical education.

Consideration is also given to National Strength and Conditioning Association (NSCA) relevant content and concepts pertaining to certification exams.

**Competencies:**

The student will:

1. discuss the classification process used for motor skills and how theoretical knowledge is beneficial to learning such skills;

2. describe to the learner of motor skills how theoretical knowledge is beneficial to learning such skills;
3. discuss the role played by preparation and the aspect of attention involved in preparing the movement control system to produce a response;
4. discuss the memory process as an important component in the processing of information in order to produce the desired skill response;
5. describe and discuss the various motor abilities that characterize individuals in various culture settings, how they have been identified, and how they related to motor skill performance;
6. describe the role that knowledge of results serves in error correction information, motivation, and reinforcement;
7. describe and discuss transfer of learning which is the influence of a previously practiced skill on the learning of a new skill;
8. discuss the importance of practice experiences and the spacing of sessions, whole or parts of skills, mental rehearsal, and fatigue and their effects on learning, retention, and performance of motor skills;
9. discuss motivation, anxiety, reinforcement, and the level of aspiration as they affect the performance of motor skills;
10. conduct a scholarly investigation of a selected topic integrating motor learning and strength and conditioning resulting in a manuscript suitable for submission to a strength and conditioning practitioner's journal; and
11. conduct out-of-class experiments based on the topics of this course and using equipment found in the ATU Human Performance Laboratory.

**Bibliography (Supplementary Peer Reviewed Journals):**

**List of Discipline Specific and Discipline Related Physical Education and Kinesiology Journals**

Please note that some of the listed journals may not be available at the Arkansas Tech Library. However, articles from missing journals may be obtained through the Tech Interlibrary Loan, or may be obtained quickly in electronic format from the Sport Discus, Physical Education Index or other on-line databases.

*Human Movement Science*
*International Journal of Sport Psychology*
*Journal of Applied Psychology*
*Journal of Applied Sport Psychology*
*Journal of Experimental Psychology*
*Journal of Motor Behavior*
*Journal of Physical Education, Recreation and Dance*
*Journal of Sport and Exercise Psychology*
*Journal of Teaching Physical Education*
*Medicine and Science in Sports and Exercise*
*Motor Control*
*Perceptual and Motor Skills*
*Research Quarterly for Exercise and Sports*
*Strength and Conditioning Journal*
*The Journal of Strength and Conditioning Research*

**Educational Opportunities:**

Instructional methodology used within this course is as follows:

1. Quizzes over assigned readings.
2. Review and discuss in online discussion boards, blogs, and Blackboard Collaborate current peer reviewed articles integrating motor learning concepts and strength and conditioning.
3. A scholarly review of literature integrating motor learning concepts and strength and conditioning written according to the American Psychological Association guidelines and based on library research.
4. Laboratory assignments amplifying concepts related to motor learning and strength and conditioning.

**Description of Assessment Methods:**

1. **Everyday Narratives**. Students will read "Everyday Narratives" for each chapter. You will have questions and activities assigned with the readings to reinforce concepts related to the textbook.
2. **Participation.** You need to participate in online discussion boards, blogs, and Blackboard Collaborate. A rubric will be provided to guide students' participation activity in the above online tools. Student activity will be evaluated in each module.
3. **Quizzes**. Multiple choice questions over selected reading assignments will make up the quizzes. Point value of the quizzes may vary.
4. **Review of literature**. A scholarly review of literature integrating motor learning concepts and strength and conditioning written according to the American Psychological Association guidelines and based on library research.
5. **Laboratory assignments.** Labs will be conducted in selected learning modules. The purpose of the labs is to reinforce concepts and encourage active learning.
6. **Culminating Project.** Students will respond to a scenario related to a sport or activity they select. The purpose of the activity will be to give the students an opportunity to show their understanding of Motor Learning Principles and an ability to integrate those principles into their field of study.
7. **Personal Review of Learning**. You are the student. Who better than you knows what you have learned in this class. You will conduct a review of your learning and evaluate yourself.
8. **TBA**

**Grading:**

Grading is based on the accumulation of total points on all work attempted for a grade and developed according to the following scale:

100%-90% = A
89%-80% = B
79%-70% = C

**Academic Dishonesty and Disruption:**

The instructor will adhere to the University Academic Misconduct/Academic Dishonesty Policy. Students have a right to appeal an assigned grade following the Appeal of Academic Grade procedure as outlined in the Student Handbook.

# Tentative Course Schedule

| Week | Class | Date | Learning Activities | Assignments |
|---|---|---|---|---|
| 1 | | 11 Jan | Introduction to Motor Learning | |
| | | 12 Jan | Who Are You? | Getting to Know me<br>Post your autobiographical sketch |
| | | 13 Jan | Cumulative and Formative Assessment | Diagram Your Knowledge |
| | | 14 Jan | | |
| | | 15 Jan | | |
| 2 | | 18 Jan | No Class | |
| | | 19 Jan | **Chapter One** Introduction to Motor Learning and Performance | Chapter One Pretest<br>Terminology |
| | | 20 Jan | | |
| | | 21 Jan | | Everyday Narratives |
| | | 22 Jan | | |
| 3 | | 25 Jan | | Learning Activity 1.3 |
| | | 26 Jan | | |
| | | 27 Jan | | |
| | | 28 Jan | | **Article Summary #1** |
| | | 29 Jan | Discussion Board Assignment | |
| 4 | | 01 Feb | Single Subject Research Design | Single Subjects Research Designs Introduction PDF |
| | | 02 Feb | | SSR Chapter 07 |
| | | 03 Feb | | |
| | | 04 Feb | | |
| | | 05 Feb | | **Chapter One Assignments Due** |
| 5 | | 08 Feb | **Chapter Two** The Mental Side of Human Performance | Chapter Two Pretest<br>Terminology |
| | | 09 Feb | | |
| | | 10 Feb | | Everyday Narratives |
| | | 11 Feb | | |
| | | 12 Feb | | |
| 6 | | 15 Feb | | Learning Activity 2.4 |
| | | 16 Feb | | |
| | | 17 Feb | | |
| | | 18 Feb | | **Article Summary #2** |
| | | 19 Feb | Discussion Board Assignment | |
| 7 | | 22 Feb | Single Subject Research Design | Single Subjects Research Designs Introduction PDF |
| | | 23 Feb | | SSR Chapter 07 |
| | | 24 Feb | | |
| | | 25 Feb | | |
| | | 26 Feb | | **Chapter Two Assignments Due** |
| 8 | | 01 Mar | **Chapter Three** Limitations on Information Processing | Chapter Three Pretest<br>Terminology |
| | | 02 Mar | | Everyday Narratives |
| | | 03 Mar | | Learning Activity 3.5 |
| | | 04 Mar | | **Article Summary #3** |
| | | 05 Mar | | |

| | | | | |
|---|---|---|---|---|
| 9 | | 08 Mar | **Chapter Four** Feedback Processing in Motor Control | Chapter Four Pretest<br>Terminology |
| | | 09 Mar | | Everyday Narratives |
| | | 10 Mar | | Learning Activity 4.5 |
| | | 11 Mar | | **Article Summary #4** |
| | | 12 Mar | | **Chapter Three Assignments Due** |
| 10 | | 15 Mar | Chapter Five Motor Control of Brief Actions | Chapter Five Pretest<br>Terminology |
| | | 16 Mar | | Everyday Narratives |
| | | 17 Mar | | Learning Activity |
| | | 18 Mar | | **Article Summary #5** |
| | | 19 Mar | | **Chapter Four Assignments Due** |
| 11 | | | Spring Break<br>Spring Break<br>Spring Break<br>Spring Break<br>Spring Break | |
| 12 | | 29 Mar | Chapter Six Controlling Simple Movements | Chapter Six Pretest<br>Terminology |
| | | 30 Mar | | Everyday Narratives |
| | | 31 Mar | | Learning Activity |
| | | 01 Apr | | **Article Summary #6** |
| | | 02 Apr | | **Chapter Five Assignments Due** |
| 13 | | 05 Apr | Chapter Nine Skill Acquisition, Retention, and Transfer | Chapter Nine Pretest<br>Terminology |
| | | 06 Apr | | Everyday Narratives |
| | | 07 Apr | | Learning Activity |
| | | 08 Apr | | |
| | | 09 Apr | | **Chapter Six Assignments Due** |
| 14 | | 12 Apr | Chapter Ten How the Structure of Practice Influences Learning | Chapter Ten Pretest<br>Terminology |
| | | 13 Apr | | Everyday Narratives |
| | | 14 Apr | | Learning Activity |
| | | 15 Apr | | |
| | | 16 Apr | | **Chapter Nine Assignments Due** |
| 15 | | 19 Apr | Chapter Eleven How Supplemental Feedback Influences Learning | Chapter Eleven Pretest<br>Terminology |
| | | 20 Apr | | Everyday Narratives |
| | | 21 Apr | | Learning Activity |
| | | 22 Apr | | |
| | | 23 Apr | | **Chapter Ten Assignments Due** |
| 16 | | 26 Apr | Reading Day | |
| Final Examination: 28 April 2020 | | | | |

# PE 6053 – Biomechanics

**Prerequisites: PE 2653, PE 3663 or equivalent with a B or better, algebra or general mathematics, and physical science or physics, or approval by department head.**

Dr. Michael Waller USAW-L2, CSCS, NSCA-CPT, FNSCA
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Phone: 479-9640526
**E-mail: mwaller3@atu.edu**
**Office Hours: M, W 9am-12pm or by Appointment**
**My door is always open, unless I am meeting with another student.**

**Catalog Description:**
The application of physics as it relates to human movement. Specific emphasis will be made on the mechanics and common injuries involved with selected sport or work-related movements.

**Course Description:**
This course is concerned with teaching students to apply the basic principles of physics to the human body. The course grade will come from quizzes, laboratories, and the cumulative exam covering the student's ability to describe, identify, and calculate terms and problems related to kinematics and kinetics (linear and angular) as they relate to persons performing specific sport skills.

**Required Book:** McGinnis PM. (2013) Biomechanics of Sport and Exercise, 3rd edition. Human Kinetics. Champaign, IL. ISBN-10: 0-7360-7966-1

**Rationale:**
The application and study of mechanical and anatomical kinesiology is critical to individuals desiring to work in areas in which human movement is analyzed. Through biomechanical analysis, programs can be designed to enhance performance, prevent injuries, and rehabilitate existing injuries.

**Student Learning Outcomes/Competencies:**
1. Describe and give illustrations of human movement with reference to anatomical positions, types of motion, planes of action, and axes.
2. Describe, differentiate, give an example of, and construct displacement, velocity, and acceleration graphs with regard to human movement.
3. Calculate linear and angular displacements, velocities, and accelerations.
4. Calculate average and instantaneous velocities and accelerations using graphs.
5. Resolve, add, subtract, and multiply vectors.
6. Calculate, explain, and describe the parallelogram and head to tail methods of resolving vectors.
7. Calculate horizontal and vertical displacements of projectiles and explain and describe the factors that have an effect on their displacement.
8. Explain and describe a human movement with regard to linear and angular kinematics.

9. Explain the principles of Newton's Laws in relation to linear and angular kinetics using examples of human movement.
10. Calculate and explain momentum as it relates to human movement.
11. Calculate, explain, and describe sliding friction.
12. Describe inertia, mass, and force.
13. Calculate and explain "conservation of momentum" as it relates to human movement.
14. Calculate, explain, and describe impact, pressure, work, power, and energy.
15. Calculate, explain, and describe the coefficient of restitution.
16. Calculate and explain how the elasticity, spin, and friction interrelate at impact.
17. Describe eccentric force, couple, moment, and resultant moment.
18. Compare and contrast first, second, and third class levers with regard to mechanical advantage and relate this information to a movement analysis.
19. Calculate the mechanical advantage of various levers.
20. Identify and describe first, second, and third class levers and relate their functions with speed and strength.
21. Describe the center of mass of the human body and its segments and explain their importance with regard to force applications and injury prevention.
22. Calculate the center of gravity of the body.
23. Explain and describe the segmentation method with regard to calculating center of gravity and digitizing.
24. Explain and describe the principles of stability in relation to human movement.
25. Calculate, explain, and describe moment of inertia, transfer of momentum, angular momentum, and impulse

**COURSE PROCEDURES AND EXPECTATIONS**

1) Professional job expectations include the fact that you will arrive to work "on time." This course should be treated the same, as it is a direct link to your future professional success.
2) I expect you to work hard every day and I expect you to respect and help each other during every class.
3) Athletic apparel should be worn during gymnasium, weight-room and lab sessions. This means athletic shoes (e.g. cross-trainers), t-shirts, and shorts or athletic pants. Failure to arrive dressed for and participate in activities will result in a **5-point deduction**. (For activity labs or assignments)
4) You will need access to a computer, the web, and a word processing program for course assignments.
5) **ALL WRITING ASSISGNMENTS:** For credit, assignments must be typed, Times New Roman font, double-spaced, 12-point font size, and in APA format as set by the university. In addition, assignments should be clearly typed, grammatically correct, and free from spelling errors. **NO LATE ASSIGNMENTS WILL BE ACCEPTED*.** Late assignments (i.e., an assignment is late if it is turned in after class has begun on that day or after the due date and time) will only be accepted under unusual circumstances** and if the instructor is notified in a prompt manner. If the instructor is not notified of such circumstances in a timely manner, the student will receive a "0" grade for the assignment.
6) **Assignments must reflect original work. Although problem-solving in groups is recommended, students may not turn in assignments that are identical to one**

**another. Assignments turned in by students that have large volumes of information that are identical to each other constitutes a violation of the Student Code, and will receive no credit. (See PLAGIARISM Section)**

7) Students will not be allowed to take the course if the required prerequisites have not been completed.
8) Students are responsible for knowing the registration, drop, withdrawal, and final exam dates for the semester.

*Exceptions will be made on an individual basis, and only with documented medical emergencies and/or in accordance with University excused absence policies. Assignments are due at the **beginning** of the class and will not be accepted as email attachments unless otherwise approved in advance.

**Examples of unusual circumstances include a death in the immediate family, illness that requires medical treatment (documentation will be requested) or an emergency that your attention is required. Computer and/or printer error on the day an assignment is due is NOT considered an unusual circumstance. University-sponsored trips and/or functions are considered excused absences.

**STUDENT RESPONSIBILITIES**

1) Students are required to follow instructor rules, comply with instructions given, and utilize correctly all safety equipment or procedures provided or indicated.
2) Respect for the in-class members and the professor. **All electronic communications devices including cell phones will be placed in a designated are or will be turned off during class and placed in your bag (See CELL PHONE / I-PHONE POLICY).** Students who are texting, playing games, sleeping or being disruptive distract those who are trying to listen and participate, will be dismissed from the course and counted as unexcused absence. If you are tired or feel the need to use your phone leave the classroom and return when you are finished. It will be your responsibility to ask your classmates to assist you with the material missed.
3) During any activity portion of the course, students are expected to use respectful language and support their classmates regardless of size, shape or abilities.
4) Dress appropriately for the practical portion of class. For your safety and respect for others, please wear modest, comfortable clothing. Shoes, preferably tennis shoes, must be worn at all times. Professional attire is mandatory when working with clients and examples of professional attire is warm-up pants, clean shorts, and collared shirts. If profane or clothing that is not preapproved, then the student will lose a full letter grade for the hands-on portion of the course.
5) None of the information provided in lecture or discussion is meant to be offensive or discriminatory. Some issues may be sensitive for you personally, but the discussion is not intended to single out anyone. *** If you have any condition that requires special accommodations in testing or class structure, please advise the instructor at the beginning of the semester so that appropriate action can be taken. ***

**ATTENDANCE POLICY:**

University Policy states:

"Regular class attendance is considered essential if students are to receive maximum benefit from any course. Control of class attendance is vested in the teacher, who has the responsibility

of defining early in each course his/her standards and procedures. A student accumulating an excessive number of unjustifiable absences in a course may be dropped from the course by the instructor with a grade of 'FE.' A student who is dropped from three courses in a semester for unsatisfactory class attendance may be immediately suspended."

1) Class Attendance and Participation. **Attendance is required (See University Policy)**, and there are very few good excuses for being absent. If you are going to be absent, make every effort to contact the instructor beforehand. Absences are more likely to be excused if you have proof of the excuse from medical provider.
2) Missed in-class assignments or exams for excused absences during the semester will need to be made up based on the instructor's availability. These make-ups will occur within 2 weeks upon the student's return to class.
3) **All quizzes will be given at the beginning of class to ascertain attendance and reinforce learning. Quizzes will not always be given but if a quiz is performed, no late or make-up quizzes will be given.**

**More than 3 unexcused absences will result in a full grade deduction from your final grade for each additional offense. Four unexcused absences = 1 grade deduction, 5 unexcused absences = 2 grade deductions, etc. This policy will be strictly enforced!**
*As this class is online, the standard attendance policy does not apply. However, students are expected to spend time on Blackboard and working on assignments weekly. Failure to log in to Blackboard for a period of greater than one (1) week will necessitate dropping the class.*

**Title IX of the Education Amendments of 1972 prohibits sex discrimination in educational programs and activities.**
*"No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance."*
- 20 U.S.C. § 1681 & C.F.R. Part 106
Sexual misconduct constitutes sexual discrimination and is prohibited by Title IX.
Sexual misconduct is any sexual act which violates the criminal laws of the State of Arkansas or laws of the United States including but not limited to sexual assault (non-consensual sexual contact or intercourse), domestic violence, dating violence, stalking, and sexual exploitation.
The Title IX Coordinator oversees the university's compliance with Title IX of the Education Amendments of 1972. The Title IX Coordinator works with university administration, departments, students, faculty, staff, campus police and other support services to ensure that university policies and programs foster a campus community free of illegal gender discrimination and sexual violence.

Jennifer Fleming;
Title IX/Affirmative Action Coordinator
President's Office
Administration Building, Room 212
1509 N Boulder Ave.
Russellville, AR 72801
Phone: (479) 498-6020
Fax: (479) 880-4430

Email: jfleming@atu.edu

**TRIO – STUDENT SUPPORT SERVICES**

"Student Support Services (SSS) is all about student achievement and success. Our goal is to help you succeed at Arkansas Tech University, help you attain graduation with a bachelor's degree, and gain the necessary skills to either enter the work force or enter graduate or professional school."

Student Support Services
Brown Hall
105 West O Street, Suite 345
Russellville, AR 72801
Phone: (479) 880-4172
Fax: (479) 880-4239
trio.sss@atu.edu

**Grading Scale (%)**

**A = 90 – 100** **B = 80 – 89** **C = 70 – 79** **D = 60 – 69** **F = ≤ 59**

Final grade will be cumulative on all components of the class.
Please note that I do not always post quizzes, in-class assignments or attendance on Blackboard™.

**Bibliography**


1. Enoka, RM. Neuromechanics of Human Movement, 5th ed. Human Kinetics, Champaign, IL. 2015.
2. Hall, SJ. Basic Biomechanics, 7th ed. McGraw Hill. New York, NY. 2012.
3. Komi, PV., ed. Strength and Power in Sport, 2nd ed. Blackwell Science, Inc.,Malden, MA. 2003.*
4. Robertson, D.E., Caldwell, GE, Hamill, J, Kamen, G, & Whittlesey, SN. Research Methods in Biomechanics, 2nd ed, Human Kinetics, Champaign, IL, 2014
5. Zatsiorsky, VM.,ed. Biomechanics in Sport: Performance enhancement and injury prevention. Blackwell Science, Inc.,Malden, MA. 2000.*

**Historical and Applicable Significance*

# PE 6053 – Biomechanics

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Dr. Michael Waller USAW-L2, CSCS, NSCA-CPT, FNSCA
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**E-mail: mwaller3@atu.edu**
**Office Hours: M, W 9am-12pm or by Appointment**
**My door is always open, unless I am meeting with another student.**

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**Grading Scale (%)**

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Final grade will be cumulative on all components of the class.
Please note that I do not always post quizzes, in-class assignments or attendance on Blackboard™.

**Course Outline:**
AUG 24: Application of Biomechanics (CH 13,14,15)
- Discuss lab write-ups (if necessary)
- Qualitative vs Quantitative
- How is this used by a SCC?

AUG 31: Neuromuscular System (CH 9,10,11,12)
- Muscle Fiber Types
- Muscular Actions
- Excitation-Contraction
- Muscle Activation
- Post Activation Potentiation Lab – Planning

SEP 14: **Post Activation Potentiation (Lab)**

SEP 21: Kinematics (CH 2, 6)

- Speed/Velocity
- Acceleration and Deceleration
- Displacement
- Velocity/Acceleration Lab - Planning

SEP 28: **Velocity/Acceleration (Lab)**
OCT 5: [On-Line] **Electromyography review and EMG Presentation Development**
OCT 12: Kinetics (CH 1, 3, 4, 5, 7)

- Force, Work
- Power
- Impulse–Momentum
- Rate of Force Development
- Jumping, Lifting, Throwing, Kicking Lab – Planning

OCT 19: Learning the equipment

- Gymaware™
- Dartfish™

OCT 26: **Jumping (Lab)**
NOV 2: **Lifting (Lab)**
NOV 9: **Throwing (Lab)**
NOV 16: **Kicking (Lab)**
NOV 23: Biomechanics for Strength & Conditioning
FINALS - Online

**Subtopics.**

A. Linear and Angular Kinematics
   1. Linear displacement (meters, yards)
   2. Angular displacement (degrees, radians)
   3. Velocity and Speed (m/s)
   4. Acceleration ($m/s^2$)
   5. Deceleration ($-m/s^2$)
      a. Peak & Average
      b. Absolute & Relative

B. Linear and Angular Kinetics
   1. Forces (kgm, N, lbs)
   2. Power (Watts, kgm/s)
   3. Torques (Nm)
   4. Rate of Force/Torque Development ($N \cdot s^{-1}$)
   5. Impulse – Momentum ($N \cdot s$)
      a. Peak & Average
      b. Absolute & Relative

Final grade will be cumulative on all components of the class.

1) EMG Review & Presentation submission = 100 points
2) Lab Write-ups = 100 points each (600 points)
3) Final Exam Comprehensive = 100 points

= 800 points (Subject to change)

## Labs

**Specific details for each of these labs will be provided and developed prior to the start of these labs.**

1. **Post Activation Potentiation:** The examination of the effects of potentiation on muscular performance.
2. **Lifting:** The examination of linear and angular kinematics + kinetics as it relates to various lifts (e.g. hex bar deadlifts, cleans) or other related movements.
3. **Jumping Kinematics:** The examination of linear and angular kinematics + kinetics as it relates to various jumping movements.
4. **Velocity/Acceleration:** The examination of linear sprinting and change of direction kinematics. Acceleration, velocity, displacement and video analysis of an individual's kinematics will be collected for interpretation of the results.
5. **Throwing:** The examination of linear and angular kinematics & kinetics as it relates to various throwing movements.
6. **Kicking:** The examination of linear and angular kinematics & kinetics as it relates to various kicking movements.

Lab Write-up Format
NO ABSTRACTS NEEDED

Introduction: Review of topic and research question

Methods: Participants, Procedures, Statistical Analysis

Results: Presentation of the key results, Tables, Figures

Discussion: Observations, Why did the results occur?, Limitations, Future Research

Application: Specific to strength and conditioning programming or coaching

References: 10 peer-reviewed Minimum in APA format

**Electromyography (EMG) Review & Presentation:** You will spend time reading articles & books, and watching videos specific to how EMG is conducted. You will write a review on how the examination of muscular activity through the use of different exercises or skills can be used by S&C coaches, sport coaches, personal trainers, athletic trainers, &/or physical therapists. You will develop a 50 minute presentation on the application of EMG to an area of your interest that will include information how the information influences planning and programming. You will select an area of focus with the assistance of the instructor. The presentation should have an introduction, main points, and conclusion & application sections. The EMG analysis should have phases so the movement can be easily explained and understood. You may need to add kinematic & kinetic variables to connect how the EMG relates to performance, training, etc. A minimum of 10 References are required.

Examples of movements: Javelin throw, rowing, split snatch, bounds, depth jumps, backward medicine ball throws, and basketball jump shot.

**Assignments and Lab Write-ups**

| Criteria | Exceptional | Meets Expectations | Needs Improvement | Unacceptable |
|---|---|---|---|---|
| Following Instructions (15 points) I.M.R.D.A.R. | Introduction of the topic, methods or body topic, conclusion and application of topic, tables and figures are adequately and appropriately used. 1-3 errors | Introduction of the topic, methods or body topic, conclusion and application of topic, tables and figures are reduced and/or not appropriately used. 4-6 errors | Introduction of the topic, methods or body topic, conclusion and application of topic, tables and figures are inadequate and not appropriately used. 7-9 errors | Introduction of the topic, methods or body topic, conclusion and application of topic, tables and figures are missing and not appropriately used. <10 errors |
| Content (45 points) | The material is well-organized and covers all key points expected with a significant amount of detail. Key points and sub-points clearly delineated | The material is organized and covers 70-90% of key points expected with some detail. One or two elements do not seem to be clearly related to topic | The material covers 50-69% of key points expected. Minimal detail provided; some points seem vague or unclear or incorrect | The material is missing many of the key points expected. Thoughts are scattered, with minimal or incorrect detail |
| Professional writing (35 points) | There are less than 3 errors in the following areas: Spelling, punctuation, grammar or syntax in the assignment or project, sentence structure, flow and transition. | There are 4-6 errors in the following areas: Spelling, punctuation, grammar or syntax in the assignment or project, sentence structure, flow and transition. | There are 7-10 errors in the following areas: Spelling, punctuation, grammar or syntax in the assignment or project, sentence structure, flow and transition. | There are >11 errors in the following areas: Spelling, punctuation, grammar or syntax in the assignment or project, sentence structure, flow and transition. |
| Paper Presentation (5 points) | Neatly typed and uniformly formatted. The assignment has a very attractive and usable layout. It is easy to locate all important elements | Neatly typed, uniformly formatted and usable layout. Difficulty locating all important elements | Inconsistency in typing, format and difficulty locating all important elements. | Poorly formatted and the important elements are incoherently placed in the assignment. |

**Presentation Rubric**

| Task | Criteria | Low Standards | Moderate Standards | High standards | Pts |
|---|---|---|---|---|---|
| 1. Attire | Dresses for occasion | Shorts, t-shirts, shower shoes, stained or torn clothing | Clean jeans/warm-up suit, collared athletic shirt, casual work or athletic shoes | Nice slacks/skirt, button-up shirt or sweater, dress shoes/boots | 5 |
| 2. Mannerisms | Volume, speed, & clarity, poise | Reads presentation from notes or slides, mumbles, difficult to hear, multiple gestures or expressions unrelated to presentation | Speaks clearly at adequate volume, rushes, pauses or makes gestures or expressions unrelated to presentation, ie: um, uh | Clear, relaxed speech throughout, uses speech effectively to emphasize main points, few nervous gestures/expressions , use of eye contact. | 5 |
| 3. Use of technology | Uses PowerPoint | Disorganized, repetitive, includes every word of presentation in slides | Slides are concise, organized, minimal repetition | Additional details in slide background, transitions, etc | 5 |
| 4. Additional materials | Hand-outs, photos, charts, video, graphics | None observed | 2-4 observed (may be included in ppt) | 5 or more observed (may be included in ppt) | 10 |
| 5. Vocabulary | Correct terminology | Frequent use of slang/text expressions, no explanation of specific terms | Occasional use of slang, explains program specific terms | Professional vocabulary & terminology used throughout | 10 |
| 6. Writing errors in slides | Spelling, grammar, punctuation, word use | > 6 errors noticed | 4-6 errors noticed | 1-3 errors noticed | 10 |
| 7. Timeframe | Length of class time | Unsuccessfully utilized entire class time (≤ 75% of class time) | Completed >75% but < 90% of class time | Effectively used class time and disseminated information | 10 |
| 8. Answered questions | Asks for questions, answers questions | Unable to answer or unclear, incorrect answers for 50% of questions | Rambling when answering, answered 75% | Clear, direct answer to all questions, and answered 100% | 5 |
| 9. Content | Accuracy of information | Information was general; lack of peer-review support; did not address topic | Information had only < 3 professional and 3 peer-review references; presented 50% topic | Information had > 3 professional and >3 peer-review references; presented topic | 40 |

# PE 6083: Research Design and Statistics in Physical Education

Fall 2020


Instructor: Gina Kraft, PhD, ATC, CSCS

Office: Hull 108 / WebEx https://atu.webex.com/meet/gkraft

Phone: 479-968-0431

Email: gkraft@atu.edu


Office Hours: via WebEx at https://atu.webex.com/meet/gkraft
Monday-Thursday from 10:30a.m. - noon or **by appointment**

Class Time: Tuesdays, 6:00p – 9:00p

Class Location: Hull 115

## Required Textbook:

Thomas, J.R., Nelson, J.K., & Silverman, S.J. (2015). *Research Methods in Physical Activity* (7th ed.). Champaign, IL: Human Kinetics.
ISBN-13: 978-1-4504-7044-5

Cronk, B.C. (2018). *How to Use SPSS: A Step-by-step Guide to Analysis and Interpretation* (10th ed.). New York, NY: Routledge.
ISBN: 9781138308534

## Additional Materials:

Internet access

## Prerequisites:

PE 4523, equivalent, or approval by department head.

## Catalog Description:

This course is designed to familiarize the student with research literature, techniques, and statistical procedures used in physical education today.

## Competencies:

1. Demonstrate awareness of various forms of scholarly inquiry in the sport and exercise science field.
2. Be exposed to the historical role of research and the research paper in graduate education.
3. Demonstrate knowledge of the traditional elements of a thesis and the purpose of each element.
4. Demonstrate knowledge of and the ability to use a variety of library resources.
5. Demonstrate basic knowledge of major problems and tools of research design, including the control of threats to scientific validity, experimental designs, and sampling procedures.
6. Demonstrate understanding of and ability to appropriately use basic statistical and data presentation tools.
7. Demonstrate the ability to read and understand research reports culled from the sport and exercise science literature.
8. Demonstrate the ability to integrate information culled from multiple sources into a coherent literature review of a topic of the student's choice.

9. Demonstrate the ability to design a simple, data based research project involving a literature review, hypothesis development, and selection of procedures for data collection and statistical analysis.
10. Complete the Human Subjects Research Educations Modules through CITI (Collaborative Institutional Training Initiative).
11. Demonstrate the ability to present a research proposal in written and oral presentation forms.

## Description of How the Course Meets General Education Objectives:

- This course addresses the "communicate effectively" goal through the student's production of a written proposal for a research project and its oral presentation.
- This course addresses the "think critically" goal by having the student appropriately design a research study, choose related and relevant literature to support their proposed hypothesis, and choose the appropriate statistical technique to analyze the data.
- The student will become aware of "ethical perspectives" related to research (human subjects, avoiding plagiarism, ect.).
- The student will "apply scientific and quantitative reasoning" as they appropriately design their study to investigate their hypothesis.

## Class Format:

This class will be conducted face to face. If students are unable to attend physically, they may attend via WebEx.

## Attendance:

University Policy states:

> "Regular class attendance is considered essential if students are to receive maximum benefit from any course. Control of class attendance is vested in the teacher, who has the responsibility of defining early in each course his/her standards and procedures. A student accumulating an excessive number of unjustifiable absences in a course may be dropped from the course by the instructor with a grade of 'FE.' A student who is dropped from three courses in a semester for unsatisfactory class attendance may be immediately suspended."

Attendance is expected. Missing more than 2 class periods will result in the loss of a letter grade. Every absence after that will result in the loss of half a letter grade.

## Academic Dishonesty:

Plagiarism or cheating will not be tolerated. Unless permitted to work in groups, all assignments must be completed individually. The university policy for academic dishonesty will be followed. The penalty for plagiarism may range from failing the assignment to being dismissed from the program. Resources for academic integrity can be found at https://www.atu.edu/academic-integrity/.

## Assignments:

### Federal Attendance Module:

The Federal Attendance Module is also called Policy Agreements. This is worth 3 bonus points if it completed prior to the second meeting of class.

### Bibliography:

Create a list of a minimum of 15 research articles that can be used for the introduction and literature review. All articles should have been published within the last 10 years unless approved. The list should follow APA citation guidelines. Use the topic as the title for the assignment. This assignment is worth 45 points.

### Introduction:

Write the introduction for your research paper. This should utilize a professional writing style and follow the APA Style Guide. This assignment should include each of the components from RM Chapter 3. These include: Title, Introduction, Problem Statement, Hypothesis, Definitions, Assumptions and limitations, and Significance.

Literature Review: Synthesize the research related to the topic. Address all sides of the topic. This paper is not to simply be a summary of each individual article but a synthesis of the information into a compelling "story" that provides the background information needed while illustrating the need for the research project selected. In addition to showing the need for the current study, the Literature Review should lay the foundation for the methods. Provide necessary background for tests or assessments used, especially if using new technology or using a test in a new way.

Methods: Clearly explain the methodology you intend to use to address the research question posed by your project. This includes describing the Participants, the Instruments or apparatuses, Procedures, as well as the Design and analysis. The procedures need to be detailed enough that an outside researcher could replicate the project without additional information.

Statistical Assignments: There will be statistics assignments to address the following topics:

- Descriptive statistics
- Correlations
- T-tests
- Anova
- Manova
- Mancova
- Chi-squared
- Effect size

The details of each assignment will be provided in Blackboard as we go through the semester.

CITI Training: Complete the online module for Human Subjects Research by the Collaborative Institutional Training Initiative (CITI) Program. To earn credit for completion, upload your certificate to Blackboard as a pdf file. If you have already completed the module, you may repeat the module or select an alternative module.

Peer Review of Introduction: Read and provide feedback on the Introduction assignment from a peer. Provide feedback related to grammar and writing style (remember that a formal writing style is to be used). Provide feedback about the storyline. The story should flow smoothly from one idea to another. If you see ways to improve the story, share that information. You should provide quality comments to your peer. Consider the type and quality of feedback that you would find to be most beneficial and emulate that. If you submit your Introduction assignment late, you will not receive peer feedback.

Peer Review of Lit Review: Read and provide feedback on the Literature Review assignment from a peer. Provide feedback related to grammar and writing style (remember that a formal writing style is to be used). Provide feedback about the storyline. The story should flow smoothly from one idea to another. If you see ways to improve the story, share that information. You should provide quality comments to your peer. Consider the type and quality of feedback that you would find to be most beneficial and emulate that. If you submit your Literature Review assignment late, you will not receive peer feedback.

Peer Review of Methods: Read and provide feedback on the Methods assignment from a peer. Provide feedback related to grammar and writing style (remember that a formal writing style is to be used). Provide feedback about the storyline. The story should flow smoothly from one idea to another. If you see ways to improve the story, share that information. You should provide quality comments to your peer. Consider the type and quality of feedback that you would find to be most beneficial and emulate that. If you submit your Methods assignment late, you will not receive peer feedback.

Institutional Review Board: Use the IRB form provided in Blackboard. Replace the red text in the form with text that pertains to your research study.

Revision of Introduction: Revise the Introduction assignment using feedback from the original assignment submission and Peer Review. This is the final version that comprises Introduction section of the Research Project.

Revision of Lit Review: Revise the Literature Review assignment using feedback from the original assignment submission and Peer Review. This is the final version that comprises Literature Review section of the Research Project.

Revision of Methods: Revise the Methods assignment using feedback from the original assignment submission and Peer Review. This is the final version that comprises Methods section of the Research Project.

Research Project Presentation: This is a formal presentation of your research project. Use a visual aid, such as PowerPoint, to assist in your presentation. Clearly explain the Title, Introduction, Problem Statement, Hypothesis, Definitions, Assumptions and limitations, and Significance. Provide a summary review of the Literature Review. Delineate the Methods used to address the problem statement. The presentation should be no less than 8 minutes and no more than 10 minutes in length.

Some questions you might consider addressing in your presentation include the following:

- Explain why the participants you have selected are the best ones to use for this study.
- What have you done to be sure you have the skills and expertise to collect the data?
- If you find significance for your statistical analysis, will any follow-up analyses be needed? If so, what kind?
- Explain how your statistical test will evaluate the proposed hypothesis.
- How will you address trustworthiness and credibility during data collection and analysis?
- What is the value of this research? Who will be interested in the outcomes?

During each presentation, write 2 questions that you would ask your peer. Questions will be addressed as time allows. All questions will be turned in at the end of class.

Exams: There will be 1 unit exam that will be a mixture of multiple choice and essay questions.

Exams will be worth 100 points each.

**All assignments will be due at 5:50 p.m. on Tuesday of the week they are assigned.**

## Grading:

| Assignment | Point Value |
|---|---|
| CITI Training | 25 |
| Bibliography | 45 |
| Introduction | 50 |
| Literature Review | 50 |
| Methods | 50 |
| Peer Review of Intro | 25 |
| Peer Review of Lit Review | 25 |
| Peer Review of Methods | 25 |
| Statistical Assignments | 100 |
| Institutional Review Board | 100 |
| Revision of Introduction | 100 |
| Revision of Lit Review | 100 |

| Assignment | Point Value |
|---|---|
| Revision of Methods | 100 |
| Research Project Presentation | 50 |
| Exams (100 points each) | 100 |
| **Point Total** | **945** |

**Letter Grades:**

**A = 90-100%**
**B = 80-89.99%**
**C = 70-79.99%**
**D = 60-69.99%**
**F = Below 60%**

## Tentative Schedule

| Date | Reading/Topic | Assignment |
|---|---|---|
| **Week 1<br>August 25** | **Class Orientation Meeting** | |
| **Week 2<br>September 1** | RM Chapter 1: Introduction to Research in Physical Activity<br>RM Chapter 2: Developing the Problem and Using the Literature<br>SPSS Chapter 1: Getting Started | Federal Attendance Module (Policy Agreements)<br>CITI Training |
| **Week 3<br>September 8** | Library Orientation<br>RM Chapter 3: Presenting the Problem<br>RM Chapter 4: Formulating the Method<br>SPSS Chapter 2: Entering and Modifying Data | SPSS Chapter 1 |
| **Week 4<br>September 15** | RM Chapter 5: Ethical Issues in Research and Scholarship<br>RM Chapter 6: Becoming Acquainted With Statistical Concepts<br>SPSS Chapter 3: Descriptive Statistics | Bibliography<br>SPSS Chapter 2 |
| **Week 5<br>September 22** | RM Chapter 7: Statistical Issues in Research Planning and Evaluation<br>RM Chapter 8: Relationships Among Variables<br>SPSS Chapter 4: Graphing Data | Literature Review<br>SPSS Chapter 3 |
| **Week 6<br>September 29** | RM Chapter 9: Differences Among Groups<br>RM Chapter 10: Nonparametric Techniques<br>SPSS Chapter 5: Prediction and Association | Peer Review of Lit Review<br>SPSS Chapter 4 |
| **Week 7<br>October 6** | RM Chapter 11: Measuring Research Variables<br>RM Chapter 12: Sociohistorical Process in Sport Studies<br>SPSS Chapter 6: Basic Parametric Inferential Statistics and t-tests | Introduction<br>SPSS Chapter 5 |
| **Week 8<br>October 13** | Exam 1 | Peer Review of Intro |
| **Week 9<br>October 20** | RM Chapter 13: Philosophical Research in Physical Activity<br>RM Chapter 14: Research Synthesis (Meta-Analysis)<br>Chapter 7: ANOVA Models | Revision of Lit Review<br>SPSS Chapter 6<br>Sample Size Calculation |
| **Week 10<br>October 27** | RM Chapter 15: Surveys<br>RM Chapter 16: Other Descriptive Research Methods<br>SPSS Chapter 8: Nonparametric Inferential Statistics | Methods<br>SPSS Chapter 7 |
| **Week 11<br>November 3** | RM Chapter 17: Physical Activity Epidemiology Research<br>RM Chapter 18: Experimental and Quasi-Experimental Research | Revision of Intro<br>SPSS Chapter 8 |
| **Week 12<br>November 10** | RM Chapter 19: Qualitative Research<br>SPSS Chapter 9: Test Construction | Peer Review of Methods |
| **Week 13<br>November 17** | RM Chapter 20: Mixed-Methods Research<br>RM Chapter 21: Completing the Research Process<br>RM Chapter 22: Ways of Reporting Research | Revision of Methods<br>SPSS Chapter 9 |
| **Week 14<br>November 24** | Finalize the Institutional Review Board (IRB) document | IRB |
| **Week 15<br>November 30** | **Final Exam<br>Monday 6:00pm-9:00pm** | Research Project Presentation |

## Late Work Policy:

Any assignment not submitted by the deadline for any reason may be submitted up to 1 week late for a maximum of half credit.

## Bibliography:

Booth, W.C., Colomb, G.G., Williams, J.M., Bizup, J., & Fitzgerald, W.T. (2016). The Craft of Research, 4th ed. Chcago, IL: The University of Chicago Press.

*Cohen, J. (1988). Statistical Power Analysis for the Behavioral Sciences, 2nd ed. Hillsdale, NJ: Lawrence Erlbaum Associates.

Field, A. (2013). Discovering Statistics Using IBM SPSS Statistics, 4th ed. Los Angeles, CA: Sage.

Vincent, W.J. & Weir, J.P. (2012). Statistics in Kinesiology, 4th ed. Champagne, IL: Human Kinetics.

*Resource of historical significance.

# Addenda:

## Privacy & Accessibility Policies:

A comprehensive list of all Privacy and Accessibility policies for software and services on Arkansas Tech's Blackboard server can be found at: https://www.atu.edu/etech/privacy_accessibility.php. While this information is currently accurate, links and policies will change over time.

## Food Insecurity:

The Green and Gold Cupboard exists to fight hunger right here at home by providing healthy, nutritious food to all members of the Tech community, including students, faculty, and staff. Details on how to access this service can be found at: https://www.atu.edu/foodpantry/

## Safety Statement:

Students are required to follow instructor rules, comply with instructions given, and utilize correctly all safety equipment or procedures provided or indicated.

## Title IX:

Arkansas Tech University does not discriminate on the basis of color, sex, sexual orientation, gender identity, race, age, national origin, religion, veteran status, genetic information, or disability in any of our practices, policies, or procedures. If you have experienced any form of discrimination or harassment, including sexual misconduct (e.g. sexual assault, sexual harassment, stalking, domestic or dating violence), we encourage you to report this to the institution. If you report such an incident of misconduct to a faculty or staff member, they are required by law to notify Arkansas Tech University's Title IX Coordinator and share the basic fact of your experience. The Title IX Coordinator will then be available to assist you in understanding all of your options and in connecting you with all possible resources on and off campus. For more information please visit: http://www.atu.edu/titleix/index.php.

Arkansas Tech University adheres to the requirements of the Americans with Disabilities Act in order to prevent barriers to academic accessibility. If you need an accommodation due to a disability, please contact the ATU Office of Disability Services, located in Doc Bryan Student Center, Suite 171, or visit http://www.atu.edu/disabilities/index.php.

# Recommended Syllabus Statement:

Arkansas Tech University does not discriminate on the basis of color, sex, sexual orientation, gender identity, race, age, national origin, religion, veteran status, genetic information, or disability in any of our practices, policies, or procedures. If you have experienced any form of discrimination or harassment, including sexual misconduct (e.g. sexual assault, sexual harassment, stalking, domestic or dating violence), we encourage you to report this to the institution. If you report such an incident of misconduct to a faculty or staff member, they are required by law to notify Arkansas Tech University's Title IX Coordinator and share the basic fact of your experience. The Title IX Coordinator will then be available to assist you in understanding all of your options and in connecting you with all possible resources on and off campus. For more information please visit: http://www.atu.edu/titleix/index.php.

Arkansas Tech University adheres to the requirements of the Americans with Disabilities Act in order to prevent barriers to academic accessibility. If you need an accommodation due to a disability, please contact the ATU Office of Disability Services, located in Doc Bryan Student Center, Suite 171, or visit http://www.atu.edu/disabilities/index.php.

# SCS 6013: Measurement and Evaluation in Strength and Conditioning
# Spring 2020


Instructor: Gina Kraft, PhD, ATC, CSCS
Office: Hull 108
Phone: 479-968-0431
Email: gkraft@atu.edu


Office Hours: Tuesday 9:30-11:30 a.m. and Wednesday/Thursday 1:30 p.m. to 3:30 p.m. or by appointment

Class Time: Monday 6:00p-9:00p

Class Location: Hull 135

## Required Textbook:

Miller, T. (Ed.). (2012). *NSCA's Guide to Tests and Assessments*. Champaign, IL: Human Kinetics.
ISBN-13: 978-0-7360-8368-3

## Recommended Textbook:

Haff, G. G. & Triplett, N. T. (Eds.). (2016). *Essentials of Strength Training and Conditioning.* Champaign, IL: Human Kinetics.
ISBN-13: 978-1-4925-0162-6

## Additional Materials:

Calculator
Internet access

## Prerequisites:

None (other than admission to the grad program)

## Catalog Description:

An advanced investigation of measurement and assessment theory along with the study of various test and measurement protocols used in strength and conditioning, exercise, and sport. Testing in the cognitive, psychomotor, health-fitness, and affective domains will be reviewed. Criteria for selection of tests including validity, reliability, objectivity, and utility. Basic statistical methods as applied to strength and conditioning with particular emphasis on interpretation and evaluation of results will be emphasized.

## Course Description:

An advanced investigation of measurement and assessment theory along with the study of various test and measurement protocols used in strength and conditioning, exercise, and sport. Testing in the

cognitive, psychomotor, health-fitness, and affective domains will be reviewed. Criteria for selection of tests including validity, reliability, objectivity, and utility. Basic statistical methods as applied to strength and conditioning with particular emphasis on interpretation and evaluation of results will be emphasized.

## Competencies:

1. Demonstrate how to select assessments based on the concepts of validity, reliability, objectivity, and utility.
2. Administer a pre-exercise screening.
3. Evaluation of anthropometrics and body composition.
4. Evaluate heart rate and blood pressure.
5. Evaluate aerobic power.
6. Evaluate of anaerobic fitness.
7. Evaluate muscle strength.
8. Evaluate muscle endurance.
9. Evaluate speed and agility.
10. Evaluate flexibility.
11. Evaluate balance and stability.

## Class Format:

The class will consist primarily of lecture, discussion, and activity sessions. Some class periods will utilize group work, in-class activities, and lab type experiences. Students are expected to come to class prepared to participate in class discussions by having read the assigned chapter in the textbook and by completing the online assignment for that chapter. In addition, students dress prepared for physical activity (modesty is expected).

## Attendance:

University Policy states:

> "Regular class attendance is considered essential if students are to receive maximum benefit from any course. Control of class attendance is vested in the teacher, who has the responsibility of defining early in each course his/her standards and procedures. A student accumulating an excessive number of unjustifiable absences in a course may be dropped from the course by the instructor with a grade of 'FE.' A student who is dropped from three courses in a semester for unsatisfactory class attendance may be immediately suspended."

## Academic Dishonesty:

Plagiarism or cheating will not be tolerated. Unless permitted to work in groups, all assignments must be completed individually. The university policy for academic dishonesty will be followed.

## Grading:

| | | |
|---|---|---|
| Assessment Ranking | | |
| | 10 at 10 points each | 100 points |
| Athlete Assessment | | |
| | 11 at 20 points each | 220 points |
| Non-Athlete Assessment | | |
| | 11 at 20 points each | 220 points |
| Athlete/Non-Athlete Comparison | | |
| | 11 at 5 points each | 55 points |
| Managing Skill Based Assessment | | |
| | 1 at 50 points | 50 points |
| Managing Fitness Based Assessment | | |
| | 1 at 100 points | 100 points |
| Midterm Exam | | 100 points |
| Final Exam | | 100 points |
| **Total** | | **945 points** |

Grading Scale

| | | |
|---|---|---|
| 850.5-945 points | 90-100% | A |
| 756-850.4 points | 80-89% | B |
| 661.5.5-755.9 points | 70-79% | C |
| 567-661.4 points | 60-69% | D |
| Below 567 points | ≤60% | F |

# ASSIGNMENT DESCRIPTIONS

## Assessment Ranking:

Choose three assessments for the specified component of fitness. Compare and contrast the assessments based on their validity, reliability, objectivity, and utility. Rank the assessments based on the quality of these assessments.

Evaluations will be completed for the following components of fitness:

Body Composition
- Metabolic Rate
- Aerobic Power
- Lactate Threshold
- Muscular Strength
- Muscular Endurance
- Power
- Speed and Agility
- Mobility
- Balance and Stability

## Athlete Assessment:

Choose an athlete not taking this class. For the specified component of fitness, select the required number of assessment (see below). Perform all assessments with the athlete. If assessments will require the use of the lab, schedule a time to use the lab with the professor.

Create a document that includes the following information: description of the athlete (age, gender, sport, and other pertinent data), the selected tests, the athlete's results for all selected tests, and a comparison to normative data for all selected tests.

Athlete Assessments will be performed for the following components of fitness:
- Body Composition (Height, Weight, BMI, Waist Hip Ratio, Skinfolds, Bioelectrical Impedance)
- Heart Rate and Blood Pressure (Resting)
- Metabolic Rate (use all prediction equations from Table 4.1)
- Aerobic Power (choose 1 Treadmill test and 1 other test)
- Lactate Threshold
- Muscular Strength (choose 1 upper body and 1 lower body assessment)
- Muscular Endurance (choose 1 upper body and 1 lower body assessment)
- Power (choose 2 lower body and 1 upper body assessment)
- Speed and Agility (choose 1 speed and 1 agility assessment)
- Mobility (choose 1 single joint and 1 multi-joint assessment)
- Balance and Stability (choose 2 assessments)

## Non-Athlete Assessment:

Repeat the Athlete Assessment assignment with someone who is not an athlete and is not actively training for any sporting event.

## Athlete/Non-Athlete Comparison:

Type a brief comparison of the results and findings from the Athlete Assessment and the Non-Athlete Assessment. Did the results and findings match your expectations? Explain.

## Managing Skill Based Assessment:

In conjunction with PE 2111 assist with 1 skill based assessment during the semester. PE 2111 meets in the double gym Monday-Thursday from 2:30pm-4:00pm. Testing will occur at 3 points during the semester. Attendance is expected at 1 of the 3 testing sessions on either Wednesday or Thursday. Assist with the assessment as directed by the instructor for PE 2111.

To earn credit for this, type a 1 page double-spaced report of your experience. Include the following:

1. What skill was assessed?
2. How was it assessed?
3. How was the assessment organized?
4. What worked well with the organization?
5. What did not work with the organization?
6. If you were in charge, how would you change the organization?
7. Other pertinent details.

## Managing Fitness Based Assessment:

In a group complete the FitnessGram assessment for a group of students from RP 4023. Plan, organize, and administer the assessment.

To earn credit for this assessment, provide the results of the assessment for all students in the RP 4023 group.

## Midterm/Final Exam:

The Midterm exam covers all material discussed at the time of the exam. The Final Exam is comprehensive. Students will be expected to select the assessments that best fit a given situation, explain the choices, and provide specific and detailed instructions for completion of the selected assessments.

## Assignment Format:

All assignments are to be typed and submitted in Blackboard. Please use 1-inch margins, 12-point font, and a standard font such as Calibri, Times New Roman or Arial. Upload one of the following file types to Blackboard: .pdf, .doc, .docx, or .txt.

All assignments are due by class time on the due date.

## Tentative Schedule

| Date | Topic and Readings | Assignment |
|---|---|---|
| January 13 | Introduction<br>Chapter 1: Test, Data Analysis, and Conclusions<br>Pre-exercise Screening | |
| January 20 | **Martin Luther King Holiday** | |
| January 27 | Chapter 2: Body Composition | Body Composition Ranking |
| February 3 | Chapter 3: Heart Rate and Blood Pressure | Body Composition Assessments and Comparison |
| February 10 | Chapter 4: Metabolic Rate | Metabolic Rate Ranking<br>Heart Rate and Blood Pressure Assessments and Comparison |
| February 17 | Chapter 5: Aerobic Power | Aerobic Power Ranking<br>Metabolic Rate Assessments and Comparison |
| February 24 | Chapter 7: Muscular Strength | Lactate Threshold Ranking<br>Aerobic Power Assessments and Comparison |
| March 2 | Chapter 6: Lactate Threshold | Muscular Strength Ranking<br>Lactate Threshold Assessments and Comparison |
| March 9 | **Midterm Exam** | |
| March 16 | Chapter 8: Muscular Endurance | Muscular Endurance Ranking<br>Muscular Strength Assessments and Comparison |
| March 23 | **Spring Break** | |
| March 30 | Chapter 9: Power | Power Ranking<br>Muscular Endurance Assessments and Comparison |
| April 6 | Chapter 10: Speed and Agility | Speed and Agility Ranking<br>Power Assessments and Comparison |
| April 13 | Chapter 11: Mobility | Mobility Ranking<br>Speed and Agility Assessments and Comparison |
| April 20 | Chapter 12: Balance and Stability<br>**SHAPE Conference** | Balance and Stability Ranking<br>Mobility Assessments and Comparison |
| April 27 | Functional Movement Screening | Balance and Stability Assessments and Comparison |
| May 4 (Monday) | **Final Exam (7:00pm-9:00pm)** | |

## Bibliography:

Haff, G. G & Triplett, N. T. (Eds.) (2016). Essentials of Strength Training and Conditioning (4th ed.). Champaign, IL: Human Kinetics.

Haywood, V. & Gibson, A. (2014). Advanced Fitness Assessment and Exercise Prescription (7th ed.). Champaign, IL: Human Kinetics.

Neiman, D. (2011). Exercise Testing And Prescription: A Health-Related Approach (7th ed.). New York, NY: McGraw-Hill.

Pescatello, L. S., Arean, R., Riebe, D. & Thompson, P. D. (Eds.). (2014). ACSM's Guidelines for Exercise Prescription (9th ed.). Baltimore, MD: Wolters Kluwer Health.

## Safety Statement:

Students are required to follow instructor rules, comply with instructions given, and utilize correctly all safety equipment or procedures provided or indicated.

## Title IX:

Arkansas Tech University does not discriminate on the basis of color, sex, sexual orientation, gender identity, race, age, national origin, religion, veteran status, genetic information, or disability in any of our practices, policies, or procedures. If you have experienced any form of discrimination or harassment, including sexual misconduct (e.g. sexual assault, sexual harassment, stalking, domestic or dating violence), we encourage you to report this to the institution. If you report such an incident of misconduct to a faculty or staff member, they are required by law to notify Arkansas Tech University's Title IX Coordinator and share the basic fact of your experience. The Title IX Coordinator will then be available to assist you in understanding all of your options and in connecting you with all possible resources on and off campus. For more information please visit: http://www.atu.edu/titleix/index.php.

Arkansas Tech University adheres to the requirements of the Americans with Disabilities Act in order to prevent barriers to academic accessibility. If you need an accommodation due to a disability, please contact the ATU Office of Disability Services, located in Doc Bryan Student Center, Suite 171, or visit http://www.atu.edu/disabilities/index.php.

**SCS 6033: Strength and Conditioning Program Design and Development**

**Spring 2021**
**Arkansas Tech University**
**Department of Health and Physical Education**
**Dr. Michael Waller USAW-L2, CSCS, NSCA-CPT, FNSCA**
**Phone: 479-964-0526**
**E-mail: mwaller3@atu.edu**
**Office Hours: TU – TH 9am-12pm; or by Appointment**
**My door is always open, unless I am meeting with another student.**

**PREREQUISITES:**
Admission to the Strength and Conditioning Master's degree program.

**COURSE DESCRIPTION:**
An advanced course that integrates scientific principles and practical applications related to designing a safe and effective strength and conditioning training program. Tenets from Exercise Physiology, Biomechanics, and Exercise Psychology will be reviewed as design principles are covered.

**Required text:**
Bompa, TO, and Buzzichelli, CA. (2019) Periodization: theory and methodology of training, 6th ed. Champaign, IL: Human Kinetics. ISBN: 9781492544807

**COMPETENCIES:**
The course will prepare students to effectively complete the following:

1. Depict and explain the Program Development Cycle (total program design).
2. Depict and explain the Movement Triad (physiologic, biomechanical, and neurologic components.
3. List, explain, and employ the Principles of Training:
    a. Safety first
    b. Adherence is critical
    c. Progressive overload and the Acute Program Design Variables (beginning on page 187).
    d. Specificity (SAID principle)
    e. Law of Diminishing Returns
    f. Nutrition is the foundation, or Food is Fuel
    g. Stress management is critical
    h. Rest and recovery are critical
    i. Reversibility (Use it or lose it)
    j. Individuality
4. Apply proper variation of acute program design variables to achieve peak performance.
5. Write and individualized strength training and conditioning program.
6. Apply knowledge of the foundation of the neuromuscular system in designing a strength training and conditioning program.
7. Apply knowledge of the foundation of the bioenergetics system in designing a strength training and conditioning program.

8. Apply knowledge of the foundation of the endocrine system in designing a strength training and conditioning program.
9. Apply knowledge of the foundation of the cardiopulmonary system in designing a strength training and conditioning program.
10. Discuss the pros and cons of various resistance training systems.
11. Discuss the factors that affect the detraining phenomenon.

**COURSE PROCEDURES AND EXPECTATIONS**

1) Professional job expectations include the fact that you will arrive to work "on time." This course should be treated the same, as it is a direct link to your future professional success. Participation points will be deducted for each late arrival (for class lectures and labs).
2) I expect you to work hard every day and I expect you to respect and help each other during every class.
3) Athletic apparel should be worn during gymnasium, weight-room and lab sessions. This means athletic shoes (e.g. cross-trainers), t-shirts, and shorts or athletic pants. Failure to arrive dressed for and participate in activities will result in a **5-point deduction**. (For activity labs or assignments)
4) You will need access to a computer, the web, and a word processing program for course assignments.
5) **ALL WRITING ASSISGNMENTS:** For credit, assignments must be typed, Times New Roman font, double-spaced, 12-point font size, and in APA format as set by the university. In addition, assignments should be clearly typed, grammatically correct, and free from spelling errors. **NO LATE ASSIGNMENTS WILL BE ACCEPTED*.** Late assignments (i.e., an assignment is late if it is turned in after class has begun on that day or after the due date and time) will only be accepted under unusual circumstances** and if the instructor is notified in a prompt manner. If the instructor is not notified of such circumstances in a timely manner, the student will receive a "0" grade for the assignment.
6) **Assignments must reflect original work. Although problem-solving in groups is recommended, students may not turn in assignments that are identical to one another. Assignments turned in by students that have large volumes of information that are identical to each other constitutes a violation of the Student Code, and will receive no credit. (See PLAGIARISM Section)**
7) Students will not be allowed to take the course if the required prerequisites have not been completed.
8) Students are responsible for knowing the registration, drop, withdrawal, and final exam dates for the semester.

*Exceptions will be made on an individual basis, and only with documented medical emergencies and/or in accordance with University excused absence policies. Assignments are due at the **beginning** of the class and will not be accepted as email attachments unless otherwise approved in advance.

**Examples of unusual circumstances include a death in the immediate family, illness that requires medical treatment (documentation will be requested) or an emergency that your attention is required. Computer and/or printer error on the day an assignment is due is NOT considered an unusual circumstance. University-sponsored trips and/or functions are considered excused absences.

**STUDENT RESPONSIBILITIES**

1) Students are required to follow instructor rules, comply with instructions given, and utilize correctly all safety equipment or procedures provided or indicated.
2) Respect for the in-class members and the professor. **All electronic communications devices including cell phones will be placed in a designated are or will be turned off during class and placed in your bag (See CELL PHONE / I-PHONE POLICY).** Students who are texting, playing games, sleeping or being disruptive distract those who are trying to listen and participate, will be dismissed from the course and counted as unexcused absence. If you are tired or feel the need to use your phone leave the classroom and return when you are finished. It will be your responsibility to ask your classmates to assist you with the material missed.
3) During any activity portion of the course, students are expected to use respectful language and support their classmates regardless of size, shape or abilities.
4) Dress appropriately for the practical portion of class. For your safety and respect for others, please wear modest, comfortable clothing. Shoes, preferably tennis shoes, must be worn at all times. Professional attire is mandatory when working with clients and examples of professional attire is warm-up pants, clean shorts, and collared shirts. If profane or clothing that is not preapproved, then the student will lose a full letter grade for the hands-on portion of the course.
5) None of the information provided in lecture or discussion is meant to be offensive or discriminatory. Some issues may be sensitive for you personally, but the discussion is not intended to single out anyone. *** If you have any condition that requires special accommodations in testing or class structure, please advise the instructor at the beginning of the semester so that appropriate action can be taken. ***

**ATTENDANCE POLICY:**

University Policy states:

"Regular class attendance is considered essential if students are to receive maximum benefit from any course. Control of class attendance is vested in the teacher, who has the responsibility of defining early in each course his/her standards and procedures. A student accumulating an excessive number of unjustifiable absences in a course may be dropped from the course by the instructor with a grade of 'FE.' A student who is dropped from three courses in a semester for unsatisfactory class attendance may be immediately suspended."

1) Class Attendance and Participation. **Attendance is required (See University Policy)**, and there are very few good excuses for being absent. If you are going to be absent, make every effort to contact the instructor beforehand. Absences are more likely to be excused if you have proof of the excuse from medical provider.
2) Missed in-class assignments or exams for excused absences during the semester will need to be made up based on the instructor's availability. These make-ups will occur within 2 weeks upon the student's return to class.
3) **All quizzes will be given at the beginning of class to ascertain attendance and reinforce learning. Quizzes will not always be given but if a quiz is performed, no late or make-up quizzes will be given.**

**More than 3 unexcused absences will result in a full grade deduction from your final grade for each additional offense. Four unexcused absences = 1 grade deduction, 5 unexcused absences = 2 grade deductions, etc. This policy will be strictly enforced!**
*As this class is online, the standard attendance policy does not apply. However, students are expected to spend time on Blackboard and working on assignments weekly. Failure to log in to Blackboard for a period of greater than one (1) week will necessitate dropping the class.*

**Title IX of the Education Amendments of 1972 prohibits sex discrimination in educational programs and activities.**

*"No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance."*
- 20 U.S.C. § 1681 & C.F.R. Part 106
Sexual misconduct constitutes sexual discrimination and is prohibited by Title IX.
Sexual misconduct is any sexual act which violates the criminal laws of the State of Arkansas or laws of the United States including but not limited to sexual assault (non-consensual sexual contact or intercourse), domestic violence, dating violence, stalking, and sexual exploitation.
The Title IX Coordinator oversees the university's compliance with Title IX of the Education Amendments of 1972. The Title IX Coordinator works with university administration, departments, students, faculty, staff, campus police and other support services to ensure that university policies and programs foster a campus community free of illegal gender discrimination and sexual violence.

Jennifer Fleming
Title IX/Affirmative Action Coordinator
President's Office
Administration Building, Room 212
1509 N Boulder Ave.
Russellville, AR 72801
Phone: (479) 498-6020
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**TRIO – STUDENT SUPPORT SERVICES**
"Student Support Services (SSS) is all about student achievement and success. Our goal is to help you succeed at Arkansas Tech University, help you attain graduation with a bachelor's degree, and gain the necessary skills to either enter the work force or enter graduate or professional school."

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**Bibliography**


1. Chandler, TJ and Brown, LE. Editors. Conditioning for Strength and Human Performance, 2nd ed. Lippincott Williams & Wilkins. Philadelphia, PA. 2013.
2. Cunanan, AJ, DeWeese, BH, Wagle, JP, Carroll, KM, Sausaman, R, Hornsby III, WG, Haff, GG, Triplett, NT, Pierce, KC, and Stone, MH. The General Adaptation Syndrome: A Foundation for the Concept of Periodization. *Sports Med*. 48:787-797, 2018.
3. Dietz, C. and Peterson, B. Triphasic Training: A systematic approach to elite speed and explosive strength performance. BYE DIETZ SPORT ENTERPRISE. Hudson, WI. 2012.
4. Issurin, V. Block periodization versus traditional training theory: a review. *J Sports Med Phys Fitness* 48: 65-75, 2008. *
5. Kenn, J. The coach's strength training playbooks: Featuring the Tier System. Coaches Choice. Monterey, CA. 2003. *
6. Mattocks, KT, Dankel, SJ, Buckner, SL, Jessee, MB, Counts, BR, Mouser, JG, Laurentino, GC, and Loenneke, JP. Periodization: What is it good for? *Journal of Trainology* 5:6-12, 2016.
7. Mujika, I. Tapering and Peaking for Optimal Performance. Human Kinetics. Champaign, IL. 2009. *
8. Verstegen, M. and P. Williams. Core Performance. Rodale, Inc. 2004.*


*books used for unique information provided from these texts not available in other textbooks

**Presentation Rubric**

| Task | Criteria | Low Standards | Moderate Standards | High standards | Pts |
|---|---|---|---|---|---|
| 1. Attire | Dresses for occasion | Shorts, t-shirts, shower shoes, stained or torn clothing | Clean jeans/warm-up suit, collared athletic shirt, casual work or athletic shoes | Nice slacks/skirt, button-up shirt or sweater, dress shoes/boots | 5 |
| 2. Mannerisms | Volume, speed, & clarity, poise | Reads presentation from notes or slides, mumbles, difficult to hear, multiple gestures or expressions unrelated to presentation | Speaks clearly at adequate volume, rushes, pauses or makes gestures or expressions unrelated to presentation, ie: um, uh | Clear, relaxed speech throughout, uses speech effectively to emphasize main points, few nervous gestures/expressions , use of eye contact. | 5 |
| 3. Use of technology | Uses PowerPoint | Disorganized, repetitive, includes every word of presentation in slides | Slides are concise, organized, minimal repetition | Additional details in slide background, transitions, etc | 5 |
| 4. Additional materials | Hand-outs, photos, charts, video, graphics | None observed | 2-4 observed (may be included in ppt) | 5 or more observed (may be included in ppt) | 10 |
| 5. Vocabulary | Correct terminology | Frequent use of slang/text expressions, no explanation of specific terms | Occasional use of slang, explains program specific terms | Professional vocabulary & terminology used throughout | 10 |
| 6. Writing errors in slides | Spelling, grammar, punctuation, word use | > 6 errors noticed | 4-6 errors noticed | 1-3 errors noticed | 10 |
| 7. Timeframe | Length of class time | Unsuccessfully utilized entire class time (≤ 75% of class time) | Completed >75% but < 90% of class time | Effectively used class time and disseminated information | 10 |
| 8. Answered questions | Asks for questions, answers questions | Unable to answer or unclear, incorrect answers for 50% of questions | Rambling when answering, answered 75% | Clear, direct answer to all questions, and answered 100% | 5 |
| 9. Content | Accuracy of information | Information was general; lack of peer-review support; did not address topic | Information had only < 3 professional and 3 peer-review references; presented 50% topic | Information had > 3 professional and >3 peer-review references; presented topic | 40 |

**Labs and writing assignments will be evaluated based on the following criteria.**

**Writing Rubric (Note: Points will be adjusted to fit scoring scale as needed)**

| Criteria | Exceptional | Meets Expectations | Needs Improvement | Unacceptable |
|---|---|---|---|---|
| Following Instructions: *(For reviews and research) Introduction Methods Results Discussion Application* (15 points) | Introduction of the topic, methods or body topic, conclusion and application of topic, tables and figures are adequately and appropriately used. 1-3 errors | 4-6 errors | 7-9 errors | >10 errors |
| Content (45 points) | The material is well-organized and covers all key points & sub-points with a significant amount of detail & clearly delineated. | The material is organized and covers 70-90% of a key point(s). 1-2 elements do not relate to topic. 4-6 errors | The material covers 50-69% of a key points, minimal details, some points are unclear/incorrect. 7-9 errors | The material is missing many of a key points, thoughts are scattered, and incorrect details. >10 errors |
| Professional writing (35 points) | There are less than 3 errors (See guidelines Below) | There are 4-6 errors | There are 7-9 errors | There are >10 errors |
| Paper Presentation (5 points) | Neatly typed and uniformly formatted. The assignment has a very attractive and usable layout. It is easy to locate all important elements | Neatly typed, uniformly formatted and usable layout. Difficulty locating all important elements | Inconsistency in typing, format and difficulty locating all important elements. | Poorly formatted and the important elements are incoherently placed in the assignment. |

Professional writing: Proper word selection, spelling, punctuation, grammar or syntax in the assignment or project, sentence structure, sentence & paragraph flow, sentence & paragraph transition, Times New Roman, 12 font, and double spaced. Spelling.

*Note: The syllabus is not a binding legal contract. It may be modified by the instructor when the learner is given reasonable notice of the modification, particularly when the modification is done to rectify an error that would disadvantage the learner.*

**SCS 6033: Strength and Conditioning Program Design and Development**

**Spring 2021**
**Arkansas Tech University**
**Department of Health and Physical Education**
**Dr. Michael Waller USAW-L2, CSCS, NSCA-CPT, FNSCA**
**Phone: 479-964-0526**
**E-mail: mwaller3@atu.edu**
**Office Hours: TU – TH 9am-12pm; or by Appointment**
**My door is always open, unless I am meeting with another student.**

**PREREQUISITE:** Admission to the Strength and Conditioning Master's degree program.

**COURSE DESCRIPTION:**
An advanced course that integrates scientific principles and practical applications related to designing a safe and effective strength and conditioning training program. Tenets from Exercise Physiology, Biomechanics, and Exercise Psychology will be reviewed as design principles are covered.

**Required text:**
Bompa, TO, and Buzzichelli, CA. (2019) Periodization: theory and methodology of training, 6th ed. Champaign, IL: Human Kinetics. ISBN: 9781492544807

**2021 COURSE OUTLINE:**

| | |
|---|---|
| 1/11-1/25 | Introduction to Planning, Programming, Athlete Testing, Periodization |
| 11/11-1/25 | Planning the Technical, Tactical, Motor Development, Fundamentals |
| 1/25-2/1 | Periodization – Traditional Linear, Undulating, Tapering, Block |
| 1/25-2/1 | Periodization – Block, Conjugate |
| 2/8 | Periodization – Triphasic |
| 2/15 | Periodization – Tier System |
| 2/22 | Planning for the Transitional Athlete |
| 3/1 | Planning for Travel and Environment |
| 3/8 | Planning for Strength, Strength-Speed, Strength-Endurance |
| 3/15 | Planning for Speed-Strength, Speed, Agility, Quickness Dominant |
| **3/22** | **Spring Break******************** |
| 3/29 | Planning for Endurance (Anaerobic & Aerobic) Dominant |
| 4/5 | Presentations: 8-week Individual Sport end of GPP to Start of Competition |
| 4/12 | Presentations: 8-week Team Sport end of GPP to Start of Competition |
| 4/19 | Presentations: 52-week Plan |

**EVALUATION AND GRADE ASSIGNMENT:**

| | |
|---|---|
| Final Exam – Cumulative | 100 points |
| Presentations: 8-week Individual Sport | 100 points |
| Presentations: 8-week Team Sport | 100 points |
| Presentations: 52-week Plan | 100 points |
| Discussion Assignments as added | 100 points (may vary) |
| Total Points | 500 points |

**Grading Scale**

≥ 90% = A  80% - 89% = B  70% - 79% = C  60% - 69% = D  ≤ 59 = F

**Additional texts that may help:**

1. Chandler, TJ and Brown, LE. Editors. Conditioning for Strength and Human Performance, 2nd ed. Lippincott Williams & Wilkins. Philadelphia, PA. 2013.
2. Dietz, C. and Peterson, B. Triphasic Training: A systematic approach to elite speed and explosive strength performance. BYE DIETZ SPORT ENTERPRISE. Hudson, WI. 2012.
3. Fleck, S.J. & Kramer, W.J. Designing Resistance Training Programs, 4th ed. Champaign, IL: Human Kinetics. 2014.
4. Kenn, J. The coach's strength training playbooks: Featuring the Tier System. Coaches Choice. Monterey, CA. 2003.
5. Mujika, I. Tapering and Peaking for Optimal Performance. Human Kinetics. Champaign, IL. 2009.
6. Nesser, T.W., Editor. CSCCa's The Professional's Guide to Strength and Conditioning. BYU Academic Publishing. Provo, UT. 2019. *ISBN: 9781611650419 (print)*
7. Piper, T.J. and M.A. Waller. Power Training. Waller & Piper. Lake in the Hills, IL, 2008.

*Articles will be provided as necessary.*

**ASSIGNMENTS**

NOTE: During anytime the semester if you feel the need to meet with me individually or as a group please let me know.

**All Sports will be randomly assigned.**

**8-week Strength & Conditioning Plan for Individual Sport Presentation**

You will develop an 8-week strength and conditioning plan for an individual sport that will address the last 2-weeks of a GPP, the 4-weeks of SPP (Pre-Season), and the first 2-weeks of the competitive phase (In-Season). You will choose the principles of Traditional Linear, Undulating, Tapering, Block, Conjugate, Triphasic, and Tier System Periodization to develop your 8-week plan. When developing your 8-week plan you should be answering the following questions during your presentation. This S&C plan will the follow the principles that are outlined for the course and each plan will include the programming variables of training frequency (3 to 5 times a week), volume, intensity, rest, and exercise selection. You will have 15 minutes to present this information, without going beyond 16 minutes or presenting less than 14 minutes. There will be additional 5-10 minutes for questions. You will be held to the 15 minutes so practice the presentation prior to class time.

1. What is the phase(s) of training and goal? (10 pts)
2. Why are the exercises, volume, intensity, and recovery selected?(40 pts)
3. What tests and evaluations are used and why? (25 pts)
4. What type of stretching and warm-up will be used and why?(5 pts)
5. What physiological adaptations do you expect to occur?(15 pts)
6. What 5 references support your strength & conditioning plan? (Citations needed)(5pts)

**8-week Strength & Conditioning Plan for Team Sport Presentation**

You will develop an 8-week strength and conditioning plan for a team sport that will address the last 2-weeks of a GPP, the 4-weeks of SPP (Pre-Season), and the first 2-weeks of the competitive phase (In-Season). You will choose the principles of Traditional Linear, Undulating, Tapering, Block, Conjugate, Triphasic, and Tier System Periodization to develop your 8-week plan. When developing your 8-week plan you should be answering the following questions during your presentation. This S&C plan will the follow the principles that are outlined for the course and each plan will include the programming variables of training frequency (3 to 5 times a week), volume, intensity, rest, and exercise selection. You will have 15 minutes to present this information, without going beyond 16 minutes or presenting less than 14 minutes. There will be additional 5-10 minutes for questions. You will be held to the 15 minutes so practice the presentation prior to class time.

1. What is the phase(s) of training and goal? (10 pts)
2. Why are the exercises, volume, intensity, and recovery selected?(40 pts)
3. What tests and evaluations are used and why? (25 pts)
4. What type of stretching and warm-up will be used and why?(5 pts)
5. What physiological adaptations do you expect to occur?(15 pts)
6. What 5 references support your strength & conditioning plan? (Citations needed)(5pts)

**Annual Planning Presentations**

You will present an annual plan base on a periodized format, an annual plan for a team sport and one for an individual sport. Consider this an annual plan and not a program so you are looking at the overall objective of preparation of the athlete. The following questions should be addressed when developing your program but these questions do not need to be answered directly but should be clear in your program. This S&C program will use a periodized based format with the addition of conjugate methods and will have a training 3 to 5 times a week. You will choose the time of the training year as each one will provide a unique challenge to developing an effective S&C program. You will have 20 minutes to present this information, which you will need to meet that time without going beyond 21 minutes, plus additional 5 minutes for questions. You will be held to the 20 minutes so practice the presentation prior to class time.

1. What are the phases, macrocycle(s), and mesocycle(s) of plan, while considering the length of the season or number of competitions? (10 pts)
2. What will be the relationships between intensity, volume, training load, rest, technical and tactical training? (40 pts)
3. What tests and monitoring will be used and why? (25 pts)
4. What considerations will be made for academic stress, recovery, and breaks in the plan?(5 pts)
5. What are common non-contact injuries and what physiological adaptations do you expect to occur?(15 pts)
6. What 5 peer-reviewed references support your strength & conditioning plan? (Citations needed)(5pts).

**Bibliography**

1. Chandler, TJ and Brown, LE. Editors. Conditioning for Strength and Human Performance, 2nd ed. Lippincott Williams & Wilkins. Philadelphia, PA. 2013.
2. Cunanan, AJ, DeWeese, BH, Wagle, JP, Carroll, KM, Sausaman, R, Hornsby III, WG, Haff, GG, Triplett, NT, Pierce, KC, and Stone, MH. The General Adaptation Syndrome: A Foundation for the Concept of Periodization. *Sports Med*. 48:787-797, 2018.
3. Dietz, C. and Peterson, B. Triphasic Training: A systematic approach to elite speed and explosive strength performance. BYE DIETZ SPORT ENTERPRISE. Hudson, WI. 2012.
4. Issurin, V. Block periodization versus traditional training theory: a review. *J Sports Med Phys Fitness* 48: 65-75, 2008. *
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7. Mujika, I. Tapering and Peaking for Optimal Performance. Human Kinetics. Champaign, IL. 2009.*
8. Verstegen, M. and P. Williams. Core Performance. Rodale, Inc. 2004.*

*books used for unique information provided from these texts not available in other textbooks

# SCS 6043 Techniques for Development of Hypertrophy, Strength, and Power

**Arkansas Tech University**
**Department of Health and Physical Education**
***Dr. Michael Waller CSCS, NSCA-CPT***
**Phone: 479-964-0526**
**E-mail: mwaller3@atu.edu**
**Office Hours: by Appointment during summer**
**My door is always open, unless I am meeting with another student.**

## CATALOG DESCRIPTION

An intensive course designed to assist trainers and coaches in developing the ability to teach proper resistance training techniques. Scientific research dealing with the development of, flexibility, plyometric, hypertrophy, strength, and power with resistance training will be explored. Note: This is a 5-week summer course with the 1st 2-weeks completed on-line and the last 2 weeks spent on campus.

**Prerequisites: Graduate Status**

**Instructor Note:** Additionally, this course is designed to prepare students for the practical sections of nationally accredited Certified Strength and Conditioning Specialist (CSCS) certification or if you become a FULL-TIME College strength coach the Strength and Conditioning Coach Certified (SCCC) exams. Understand that a difference exists between coaching sport skill and coaching athletic preparation (strength & conditioning). I will be critical on your understanding of these differences.

## REQUIRED TEXTBOOK

Netwon, H. (2010) Explosive lifting for sports, enhanced edition. Human Kinetics, Champaign, IL. ISBN-13: 978-1-4504-0168-5

**Competencies:**

1. Review the Principles of Training:
   a. Safety First
   b. Adherence is critical
   c. Progressive overload & the Acute Program Design Variables
   d. Specificity
   e. SAID principle
   f. Variety
   g. Law of Diminishing Returns
   h. Nutrition is the Foundation…Food is Fuel
   i. Stress Management is critical
   j. Rest and recovery is critical
   k. Use it or Lose it…Reversibility
   l. Principle of Individuality
2. Identify factors that affect flexibility.

3. Describe flexibility exercises that take advantage of proprioceptive neuromuscular facilitation
4. Explain the mechanisms that cause the muscular inhibition that improves the stretch.
5. Select and apply appropriate static and dynamic stretching methods.
6. Explain the physiology of plyometric exercise.
7. Identify the phases of the stretch-shortening cycle.
8. Identify components of a plyometric training program.
9. Design a safe and effective plyometric training program.
10. Recommend proper equipment for plyometric exercise.
11. Teach correct technique for plyometric exercise.
12. Teach correct technique for medicine ball exercises.
13. Describe the factors contributing to human strength and power.
14. Discuss different modalities used in resistance training.
15. Describe the general techniques involved in properly performing resistance training exercises.
16. Provide breathing guidelines.
17. Provide recommendations for spotting free weight exercises.
18. Teach proper resistance training exercise and spotting technique.
19. Discuss how to determine 1-repetition maximum (1RM), predicted 1RM from a multiple RM, and RM loads.
20. Assign load and repetitions based on the training goal.

**COURSE PROCEDURES AND EXPECTATIONS**

1) Professional job expectations include the fact that you will complete ALL work "on time." This course should be treated the same, as it is a direct link to your future professional success.
2) I expect you to work hard every day and I expect you to respect and help each other during the course.
3) Athletic apparel should be worn during gymnasium and weight-room sessions. This
4) You will need access to a computer, the web, and a word processing program for course assignments.
5) **ALL WRITING ASSIGNMENTS:** For credit, assignments must be typed, Times New Roman font, double-spaced, 12-point font size, and in APA format reference section and in-text citations. In addition, assignments should be clearly typed, grammatically correct, and free from spelling errors. **NO LATE ASSIGNMENTS WILL BE ACCEPTED.** Exceptions will be made on an individual basis, and only with documented medical emergencies and/or in accordance with University excused absence policies. Assignments are due at the **beginning** of the class or at the set due date/time and will not be accepted as email attachments unless otherwise approved in advance. Late assignments (i.e., an assignment is late if it is turned in after class has begun on that day or after the due date) will only be accepted under unusual circumstances* and if the instructor is notified in a prompt manner. If the instructor is **NOT** notified of such circumstances in a timely manner, the student will receive a "0" grade for the assignment.

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6) Digitally duplicating or downloading any copyrighted software, programs or files.
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8) Receiving excessive help from a friend or elsewhere, or using another project as your own.
9) Insufficient or omitting information for references

[Adapted from the Modern Language Association's MLA Handbook for Writers of Research Papers. New York: MLA, 1995: 26.]

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Sexual misconduct is any sexual act which violates the criminal laws of the State of Arkansas or laws of the United States including but not limited to sexual assault (non-consensual sexual contact or intercourse), domestic violence, dating violence, stalking, and sexual exploitation.
The Title IX Coordinator oversees the university's compliance with Title IX of the Education Amendments of 1972. The Title IX Coordinator works with university administration, departments, students, faculty, staff, campus police and other support services to ensure that university policies and programs foster a campus community free of illegal gender discrimination and sexual violence.

Jennifer Fleming
Title IX/Affirmative Action Coordinator
President's Office
Administration Building, Room 212
1509 N Boulder Ave.
Russellville, AR 72801
Phone: (479) 498-6020
Fax: (479) 880-4430
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**TRIO – STUDENT SUPPORT SERVICES**
"Student Support Services (SSS) is all about student achievement and success. Our goal is to help you succeed at Arkansas Tech University, help you attain graduation with a bachelor's degree, and gain the necessary skills to either enter the work force or enter graduate or professional school."

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Brown Hall
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Russellville, AR 72801
Phone: (479) 880-4172
Fax: (479) 880-4239
trio.sss@atu.edu

**Grading Scale (%)**

**Grading is based on the acceptable completion of quizzes and laboratories, the final exam, and the biomechanical analysis all of which contribute to the accumulation of total points.**

100%-90% = A  89%-80% = B  79%-70% = C  69%-60% = D  <59% = F

**COURSE INFORMATION**
Check your email and Blackboard™ daily and weekly for announcements, assignments and additional information. Final grade will be cumulative on all components of the class. Please note that I do not always post quizzes, in-class assignments or attendance on Brightspace™.

**Evaluation and Grade Assignment:**

| | |
|---|---|
| Topic Writing Assignments (5) x 100 points each one | = 500 points |
| Weightlifting quiz | = 25 points |
| Squat and Deadlift quiz | = 25 points |
| Plyometric quiz | = 25 points |
| Strongman/Alternative training quiz | = 25 points |
| Programming exam | = 50 points |
| Final Cumulative Exam | = 100 points |
| TOTAL | = 800 points |

**Topic writing assignments:**
Your manuscript will follow the writing rubric and if a quote or an exact statement is used it will need to be properly cited. There is no minimum page requirement for these assignments but most will be around 3 pages not including reference section or figures. Peer-reviewed references (5 minimum) and APA format required for reference section, in-text citations and quotes.

Writing Assignments Dates & Topics
**June 4 (5pm):** What are the phases of the clean, snatch and jerk, and three common technique errors? What are 3 to 5 coaching cues for each of the phases and consider that you will encounter an athlete that has no experience with weightlifting?

**June 6 (5pm):** What are the variations of the clean, snatch, pulls and jerks (e.g. power clean, hang above knee snatch pull)? What are coaching progressions, cues and technique errors for each these variations?

**June 8 (9am):** What are the variations of the deadlifts and squats (e.g. sumo deadlift, rear leg elevated split squat)? What are coaching progressions, cues and technique errors for each these variations?

**June 11 (5pm):** What are the evidence-based practices and anecdotal guidelines for using German Volume and Cluster Set training in a weight training program? Use and cite your supporting material and use the basic terminology to describe an exercise (e.g. front squat + push press) as there are specific differences and avoid "coaching facility" terminology that is unique to the facility. This manuscript may range from 5 to 8 pages depending on how concise your writing is and based on the clarity of your examples.

**June 15 (9am):** What are the different classifications of plyometrics (e.g. jumps versus hops – think motor skill) and what are the variables that make a plyometric exercise high, medium or low intensity? What are the appropriate volumes, progressions and rests for the different plyometrics and why is this training important to athletic performance?

**Exercise instruction (June 17- July 2):**
***These instructions will include in-depth discussion on variations, coaching cues and research that pertains to the specific areas. The information from this instruction will be part of your exams.***

June 17: Weightlifting videos and Snatch Progressions
June 18 & 19: Snatch and Clean Progressions – Hang, Block, Power, Full and Power
June 19 & 20: Snatch, Clean and Jerk Progressions – Push Press, Push Jerk, Split Jerk, etc.
June 20 & 21: Weightlifting movement Review Coaching and Pulls (Blocks, Hang, High)
June 24: Squats – Back, Front, Split, etc.; Weightlifting Pulls
June 24 & 25: Deadlift – Conventional, Sumo, Stiffed-legged (aka RDL)
June 25 – 27: Plyometric – Jump "Shock" Training, Medicine Ball Exercises; Kettlebells
June 28: Bands, chains, partial ROM lifts, augmented eccentric training & Review
July 1 & 2: Strongman training and Training methods

**Training methods:**

1. Super setting
2. Pyramid and Inverted Pyramid
3. Pre-exhaustion
4. Tear-down (Strip Method)
5. Circuit training
6. Complexes and Hybrids
7. Complex & Contrast (Post-activation potentiation)
8. Cluster sets

**July 3: Final Exam**

**Bibliography:**


- Fleck, S.J. and W.J. Kraemer. Designing Resistance Training Programs, 4th edition. Human Kinetics, Champaign, IL. 2014.
- Haff, GG, and Triplett, NT, Editors. (2016) Essentials of strength training and conditioning, 4th ed. Human Kinetics, Champaign, IL. ISBN: 978-1-4925-0162-6
- International Council for Coaching Excellence, Association of Summer Olympic International Federations and Leeds Metropolitan University. (2013) International Sport Coaching Framework, v.1.2. Human Kinetics, Champaign, IL (ISBN-13: 9781450471275).
- Piper, T.J. and M.A. Waller. Power Training. Waller & Piper. Lake in the Hills, IL. 2008.
- Verstegen, M. and P. Williams. Core Performance. Rodale, Inc. 2004

**Labs and writing assignments will be evaluated based on the following criteria.**
**Note: Points will be adjusted to fit scoring scale**

| Criteria | Exceptional | Meets Expectations | Needs Improvement | Unacceptable |
|---|---|---|---|---|
| Following Instructions:<br>*(For reviews and research)*<br>*Introduction*<br>*Methods*<br>*Results*<br>*Discussion*<br>*Application*<br>(15 points) | Introduction of the topic, methods or body topic, conclusion and application of topic, tables and figures are adequately and appropriately used. 1-3 errors | 4-6 errors | 7-9 errors | >10 errors |
| Content<br>(45 points) | The material is well-organized and covers all key points & sub-points with a significant amount of detail & clearly delineated. | The material is organized and covers 70-90% of a key point(s). 1-2 elements do not relate to topic. 4-6 errors | The material covers 50-69% of a key points, minimal details, some points are unclear/incorrect. 7-9 errors | The material is missing many of a key points, thoughts are scattered, and incorrect details. >10 errors |
| Professional writing<br>(35 points) | There are less than 3 errors (See guidelines Below) | There are 4-6 errors | There are 7-9 errors | There are >10 errors |
| Paper Presentation<br>(5 points) | Neatly typed and uniformly formatted. The assignment has a very attractive and usable layout. It is easy to locate all important elements | Neatly typed, uniformly formatted and usable layout. Difficulty locating all important elements | Inconsistency in typing, format and difficulty locating all important elements. | Poorly formatted and the important elements are incoherently placed in the assignment. |

Professional writing: Proper word selection, spelling, punctuation, grammar or syntax in the assignment or project, sentence structure, sentence & paragraph flow, sentence & paragraph transition, Times New Roman, 12 font, and double spaced. Spelling.

**Presentation Rubric**

| Task | Criteria | Low Standards | Moderate Standards | High standards | Pts |
|---|---|---|---|---|---|
| 1. Attire | Dresses for occasion | Shorts, t-shirts, shower shoes, stained or torn clothing | Clean jeans/warm-up suit, collared athletic shirt, casual work or athletic shoes | Nice slacks/skirt, button-up shirt or sweater, dress shoes/boots | 5 |
| 2. Mannerisms | Volume, speed, & clarity, poise | Reads presentation from notes or slides, mumbles, difficult to hear, multiple gestures or expressions unrelated to presentation | Speaks clearly at adequate volume, rushes, pauses or makes gestures or expressions unrelated to presentation, ie: um, uh | Clear, relaxed speech throughout, uses speech effectively to emphasize main points, few nervous gestures/expressions , use of eye contact. | 5 |
| 3. Use of technology | Uses PowerPoint | Disorganized, repetitive, includes every word of presentation in slides | Slides are concise, organized, minimal repetition | Additional details in slide background, transitions, etc | 5 |
| 4. Additional materials | Hand-outs, photos, charts, video, graphics | None observed | 2-4 observed (may be included in ppt) | 5 or more observed (may be included in ppt) | 10 |
| 5. Vocabulary | Correct terminology | Frequent use of slang/text expressions, no explanation of specific terms | Occasional use of slang, explains program specific terms | Professional vocabulary & terminology used throughout | 10 |
| 6. Writing errors in slides | Spelling, grammar, punctuation, word use | > 6 errors noticed | 4-6 errors noticed | 1-3 errors noticed | 10 |
| 7. Timeframe | Length of class time | Unsuccessfully utilized entire class time (≤ 75% of class time) | Completed >75% but < 90% of class time | Effectively used class time and disseminated information | 10 |
| 8. Answered questions | Asks for questions, answers questions | Unable to answer or unclear, incorrect answers for 50% of questions | Rambling when answering, answered 75% | Clear, direct answer to all questions, and answered 100% | 5 |
| 9. Content | Accuracy of information | Information was general; lack of peer-review support; did not address topic | Information had only < 3 professional and 3 peer-review references; presented 50% topic | Information had > 3 professional and >3 peer-review references; presented topic | 40 |

# SCS 6053 Techniques for Development of Speed, Agility, Reaction Time and Endurance

**Arkansas Tech University**
**Department of Health and Physical Education**
***Dr. Michael Waller CSCS, NSCA-CPT***
**Phone: 479-964-0526**
**E-mail: mwaller3@atu.edu**
**Office Hours: by Appointment during summer**
**My door is always open, unless I am meeting with another student.**

## CATALOG DESCRIPTION

An intensive course designed to assist trainers and coaches in teaching various techniques designed to enhance mobility, speed, agility, reaction time, aerobic endurance, and proper sport-specific periodization. Note: This is a 5-week summer course with the 1st 2-weeks completed on-line and the last 2 weeks spent on campus.

**Prerequisites: Graduate Status**

**Instructor Note:** Additionally, this course is designed to prepare students for the practical sections of nationally accredited Certified Strength and Conditioning Specialist (CSCS) certification or if you become a FULL-TIME College strength coach the Strength and Conditioning Coach Certified (SCCC) exams. Understand that a difference exists between coaching sport skill and coaching athletic preparation (strength & conditioning). I will be critical on your understanding of these differences.

## REQUIRED TEXT

Brown, LE, and Ferrigno, VA. Editors. (2015). Training for speed, agility, and quickness, 3rd edition. Champaign, IL: Human Kinetics. ISBN: 978-1-4504-6870-1

**Competencies:**

1. Review the Principles of Training:
   a. Safety First
   b. Adherence is critical
   c. Progressive overload & the Acute Program Design Variables
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   g. Law of Diminishing Returns
   h. Nutrition is the Foundation…Food is Fuel
   i. Stress Management is critical
   j. Rest and recovery is critical
   k. Use it or Lose it…Reversibility
   l. Principle of Individuality
2. Teach correct technique for agility drills and exercises.
3. Teach techniques for developing reaction time.
4. Apply means and methods for developing speed, agility, and speed-endurance.
5. Discuss factors related to aerobic endurance performance.

6. Select modes of aerobic endurance training.
7. Set aerobic endurance training frequency based on training status, sport season, and recovery requirements.
8. Assign aerobic endurance training duration and understand its interaction with training intensity.
9. Assign aerobic endurance exercise intensity and understand the various methods used to monitor intensity.
10. Describe various types of aerobic endurance programs.
11. Discuss Periodization and the four season model (Off-Season, Pre-Season, In-Season, Post-Season) for year-round training.
12. Discuss a Macrocycle, Mesocycle, and Microcycle and how each cycle is utilized in a Strength & Conditioning Program for improved performance and injury prevention.
13. Discuss and design "Sport-Specific" training programs based on proper Periodization.

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105 West O Street, Suite 345
Russellville, AR 72801
Phone: (479) 880-4172
Fax: (479) 880-4239
trio.sss@atu.edu

**Grading Scale (%)**

**Grading is based on the acceptable completion of quizzes and laboratories, the final exam, and the biomechanical analysis all of which contribute to the accumulation of total points.**

100%-90% = A  89%-80% = B  79%-70% = C  69%-60% = D  <59% = F

**COURSE INFORMATION**

Check your email and Blackboard™ daily and weekly for announcements, assignments and additional information. Final grade will be cumulative on all components of the class. Please note that I do not always post quizzes, in-class assignments or attendance on Brightspace™.

**Evaluation and Grade Assignment:**

| | |
|---|---|
| Topic Writing Assignments (5) x 100 points each one | = 500 points |
| Sprinting quiz | = 25 points |
| Agility/change of direction quiz | = 25 points |
| Anaerobic endurance quiz | = 25 points |
| Aerobic endurance training quiz | = 25 points |
| Programming exam | = 50 points |
| Final Cumulative Exam | = 100 points |
| TOTAL | = 800 points |

**Topic writing assignments:**
Your manuscript will follow the writing rubric and if a quote or an exact statement is used it will need to be properly cited. There is no minimum page requirement for these assignments but most will be around 3 pages not including reference section or figures. Peer-reviewed references (5 minimum) and APA format required for reference section, in-text citations and quotes.

Writing Assignments Dates & Topics

**June 4 (5pm):** What are the reasons for using A-skips, B-skips, High knee-skips, and bounds for improving sprint performance? What are three common technique errors, 3 to 5 coaching cues for each of the phases and consider that you will encounter an athlete that has no experience with these movements?

**June 6 (5pm):** What are the differences between the initial start (< 10 m), acceleration (10 m – 30 m) and maintenance/peak sprint phases? What are the phases of sprint technique and what training can be done to improve these areas? What are coaching progressions, cues and technique errors for each these variations?

**June 8 (9am):** What are the evidence-based practices for strength & conditioning programming of agility & change of direction training for a soccer team? Explain how these adaptations occur and why the specific drills were chosen?

**June 11 (5pm):** What are the differences and benefits of high intensity interval, maximal lactate steady-state and Fartlek training? Use the supporting material, as there are specific differences and avoid "coaching facility" terminology that is unique to the facility.

**June 15 (9am):** What training methods and programming would increase an athlete's time to blood lactate accumulation, improve the athlete's ability to buffer lactate and improve metabolic byproduct clearance. What are the appropriate volumes, progressions and rests for the different plyometrics and why is this training important to athletic performance?

**Exercise instruction (June 17- July 2):**
***These instructions will include in-depth discussion on variations, coaching cues and research that pertains to the specific areas. The information from this instruction will be part of your exams.***

June 17: Sprinting videos and Sprint starts (e.g. 2 point) Falling, Motion & Progressions
June 18 & 19: A-skips, B-skips, High knee-skips, and bounds; Sprint starts

June 19 & 20: Linear Sprinting, resisted and assisted sprinting progressions
June 20 & 21: Change of direction, agility and quickness. Sprinting review
June 24: Anaerobic programming and testing lecture
June 25: Aerobic programming and testing lecture
June 26 – 28: Battling ropes, boxing drills, medicine ball tempos, DB circuits, Repeat sprint interval, High intensity interval training (HIIT)
July 1 & 2: SAQ Programming and Endurance Programming lecture & discussion

**Training methods (June 17- July 2):**

1. Long-slow distance
2. Tempo
3. Interval
4. Fartlek training
5. High intensity interval training
6. Maximal lactate steady-state
7. Cross-training

**July 3: Final Exam**

**Bibliography:**


- Haff, GG, and Triplett, NT, Editors. (2016) Essentials of strength training and conditioning, 4th ed. Human Kinetics, Champaign, IL. ISBN: 978-1-4925-0162-6
- International Council for Coaching Excellence, Association of Summer Olympic International Federations and Leeds Metropolitan University. (2013) *International Sport Coaching Framework, v.1.2*. Human Kinetics, Champaign, IL (ISBN-13: 9781450471275).
- Radcliffe, JC, and Farentinos, RC. High-powered Plyometrics. Human Kinetics, Champaign, IL. 1999.
- USA Track & Field. USATF Coaching Manual. Human Kinetics, Champaign, IL. 2000.
- Verstegen, M. and P. Williams. Core Performance. Rodale, Inc. 2004

**Labs and writing assignments will be evaluated based on the following criteria.**
**Note: Points will be adjusted to fit scoring scale**

| Criteria | Exceptional | Meets Expectations | Needs Improvement | Unacceptable |
|---|---|---|---|---|
| Following Instructions:<br>*(For reviews and research)*<br>*Introduction*<br>*Methods*<br>*Results*<br>*Discussion*<br>*Application*<br>(15 points) | Introduction of the topic, methods or body topic, conclusion and application of topic, tables and figures are adequately and appropriately used. 1-3 errors | 4-6 errors | 7-9 errors | >10 errors |
| Content<br>(45 points) | The material is well-organized and covers all key points & sub-points with a significant amount of detail & clearly delineated. | The material is organized and covers 70-90% of a key point(s). 1-2 elements do not relate to topic. 4-6 errors | The material covers 50-69% of a key points, minimal details, some points are unclear/incorrect. 7-9 errors | The material is missing many of a key points, thoughts are scattered, and incorrect details. >10 errors |
| Professional writing<br>(35 points) | There are less than 3 errors (See guidelines Below) | There are 4-6 errors | There are 7-9 errors | There are >10 errors |
| Paper Presentation<br>(5 points) | Neatly typed and uniformly formatted. The assignment has a very attractive and usable layout. It is easy to locate all important elements | Neatly typed, uniformly formatted and usable layout. Difficulty locating all important elements | Inconsistency in typing, format and difficulty locating all important elements. | Poorly formatted and the important elements are incoherently placed in the assignment. |

Professional writing: Proper word selection, spelling, punctuation, grammar or syntax in the assignment or project, sentence structure, sentence & paragraph flow, sentence & paragraph transition, Times New Roman, 12 font, and double spaced. Spelling.

**Presentation Rubric**

| Task | Criteria | Low Standards | Moderate Standards | High standards | Pts |
|---|---|---|---|---|---|
| 1. Attire | Dresses for occasion | Shorts, t-shirts, shower shoes, stained or torn clothing | Clean jeans/warm-up suit, collared athletic shirt, casual work or athletic shoes | Nice slacks/skirt, button-up shirt or sweater, dress shoes/boots | 5 |
| 2. Mannerisms | Volume, speed, & clarity, poise | Reads presentation from notes or slides, mumbles, difficult to hear, multiple gestures or expressions unrelated to presentation | Speaks clearly at adequate volume, rushes, pauses or makes gestures or expressions unrelated to presentation, ie: um, uh | Clear, relaxed speech throughout, uses speech effectively to emphasize main points, few nervous gestures/expressions , use of eye contact. | 5 |
| 3. Use of technology | Uses PowerPoint | Disorganized, repetitive, includes every word of presentation in slides | Slides are concise, organized, minimal repetition | Additional details in slide background, transitions, etc | 5 |
| 4. Additional materials | Hand-outs, photos, charts, video, graphics | None observed | 2-4 observed (may be included in ppt) | 5 or more observed (may be included in ppt) | 10 |
| 5. Vocabulary | Correct terminology | Frequent use of slang/text expressions, no explanation of specific terms | Occasional use of slang, explains program specific terms | Professional vocabulary & terminology used throughout | 10 |
| 6. Writing errors in slides | Spelling, grammar, punctuation, word use | > 6 errors noticed | 4-6 errors noticed | 1-3 errors noticed | 10 |
| 7. Timeframe | Length of class time | Unsuccessfully utilized entire class time (≤ 75% of class time) | Completed >75% but < 90% of class time | Effectively used class time and disseminated information | 10 |
| 8. Answered questions | Asks for questions, answers questions | Unable to answer or unclear, incorrect answers for 50% of questions | Rambling when answering, answered 75% | Clear, direct answer to all questions, and answered 100% | 5 |
| 9. Content | Accuracy of information | Information was general; lack of peer-review support; did not address topic | Information had only < 3 professional and 3 peer-review references; presented 50% topic | Information had > 3 professional and >3 peer-review references; presented topic | 40 |

# SCS 6063: Trends in Sports Nutrition & Metabolism
# Fall 2020


Instructor: Gina Kraft, PhD, ATC, CSCS
Office: Hull 108 / WebEx https://atu.webex.com/meet/gkraft
Phone: 479-968-0431
Email: gkraft@atu.edu


Office Hours: via WebEx at https://atu.webex.com/meet/gkraft
Monday-Thursday from 10:30a.m. - noon or **by appointment**

Class Time: Monday 6:00p-9:00p
Class Location: Hull 115

## Required Textbook:

Bernadot, D. (2012). *Advanced Sports Nutrition* (2nd ed.). Champaign, IL: Human Kinetics.
ISBN: 978-1-4504-0161-6

## Recommended Textbook:

Haff, G.G. & Triplett, N.T. (Eds.) (2016). *Essentials of Strength Training and Conditioning* (4th ed.). Champaign, IL: Human Kinetics.

American Psychological Society (2010). *Publication Manual of the American Psychological Society.* Washington, DC : American Psychological Association.

## Additional Materials:

Calculator
Internet access

## Prerequisites:

None (other than admission to the grad program)

## Catalog Description:

An advanced study of nutrition as a means to enhance performance in exercise and sport.

## Course Description:

An advanced study of nutrition as a means to enhance performance in exercise and sport. Topics include principles of energy metabolism, nutrients in their use during exercise, regulation of metabolism by macro and micro nutrients and their role in weight control with athletes. The validity and safety of proposed ergogenic aids are also explored.

## Competencies:

1. Discuss how intensity, duration, and fitness level influence the type of fuel used by the muscles for energy.
2. Indicate the amount of carbohydrate recommended per day for a training diet based on exercise intensity and duration.
3. Plan the following: a pre-exercise meal, a training diet, and a carbohydrate loading diet.
4. Provide guidelines for carbohydrate intake during exercise to enhance performance and following exercise to promote recovery.
5. Discuss the benefits of fat utilization during exercise and the pros and cons of a fat loading diet.
6. Discuss the protein requirements for athletes in different activities and explain why it is different for athletes.
7. List three reasons why protein and/or amino acid supplements are not necessary to increase muscle mass and performance.
8. Describe proper hydration guidelines and appropriate fluid replacement beverages to prevent dehydration and maximize performance.
9. Discuss the problems associated with the common practice of "making weight" and popular fad diets.
10. Explain the role of exercise in weight control (gain, maintenance, and loss) in regard to calorie balance and body composition.
11. List five ineffective ergogenic aids, explain why they do not enhance performance, and list three bogus claims used to promote them.
12. Discuss why nutrition quackery is prevalent among athletes and how to recognize it.
13. Design a training diet that meets calorie needs based on the person's body weight, activity, and duration of exercise.

## Class Format:

The class will consist primarily of lecture and discussion sessions. In addition, some class periods will utilize group work or in class activities. Students are expected to come to class prepared to participate in class discussions by having read the assigned chapter in the textbook and by completing the online assignment for that chapter.

If students are unable to attend physically, they may attend via WebEx.

## Attendance:

University Policy states:

> "Regular class attendance is considered essential if students are to receive maximum benefit from any course. Control of class attendance is vested in the teacher, who has the responsibility of defining early in each course his/her standards and procedures. A student accumulating an excessive number of unjustifiable absences in a course may be dropped from the course by the instructor with a grade of 'FE.' A student who is dropped from three courses in a semester for unsatisfactory class attendance may be immediately suspended."

Attendance is expected. Missing more than 2 class periods will result in the loss of a letter grade. Every absence after that will result in the loss of half a letter grade.

## Academic Dishonesty:

Plagiarism or cheating will not be tolerated. Unless permitted to work in groups, all assignments must be completed individually. The university policy for academic dishonesty will be followed. The penalty for academic dishonesty may range from failing an assignment to being dismissed from the program. Resources related to academic integrity may be found at https://www.atu.edu/academic-integrity/.

# Grading:

| | | | |
|---|---|---|---|
| Exams | | | |
| Midterm | 100 points | Grading Scale | |
| Final | 100 points | | |
| Weekly Research Article | | 90-100% | A |
| 10 at 10 points each | 100 points | 80-89% | B |
| Ergogenic Aid Brochure | 25 points | 70-79% | C |
| Diet Analysis | 100 points | 60-69% | D |
| Pre-Exercise Meal | 25 points | ≤60% | F |
| Training Diet | 25 points | | |
| Carb Loading Diet | 25 points | | |
| Weight Loss/Gain Diet | 25 points | | |
| Nutrition Education Packet | 100 points | | |
| Total | 625 points | | |

# ASSIGNMENT DESCRIPTIONS

## Federal Attendance Module:

The Federal Attendance Module is also called Policy Agreements. This is worth 3 bonus points if it completed prior to the second meeting of class.

## Exams:

Two exams will be administered during the semester: a midterm and a final. Exams will be essay questions. Grammar and writing style will be important. To assist with this, exams will be administered in the computer lab. However, students may access only the exam during this time. Exams are not "open book" or open to the internet.

## Weekly Research Article:

Students must find a peer-reviewed research article on a current topic in sports nutrition published in the past five years. Upload a copy of the research article to Blackboard along with a summary and criticism of the article. In addition to the summary and criticism, include 2 questions generated by reading the study. Begin the assignment with an APA style citation. Use a professional writing style and pay attention to grammar. Summaries should be typed and appear as follows:

**Bibliography (sample)**

Hill, K. M., Whitehead, J. R., & Goodwin, J. K. (2011). Pre-workout carbohydrate supplementation does not affect measures of selfassessed vitality and affect in college swimmers. *Journal Of Sports Science & Medicine*, *10*(3), 478-482.

**Summary** (should be a page minimum, double spaced) Be sure to include the purpose, methods, and findings.

**Critique** (critical analysis of article should be a page minimum, double spaced) Be sure to include strengths and weaknesses of the design.

**Questions** (two questions that you have concerning the article)

All Weekly Research Articles are to be posted in Blackboard by noon on the day they are due.

## Ergogenic Aid Handout/Brochure:

The ergogenic aid project will examine a nutritional substance that has been used as an ergogenic aid or has been theorized to work as an ergogenic aid. Information to be covered includes 1) how it is thought to work, 2) does this make sense physiologically, 3) does research substantiate its claims, 4) are there side effects, and 5) who should and should not use it.

Rather than writing a paper, students will create a handout or a tri-fold brochure summarizing the critical information for each member of the class. This may be done using Microsoft Publisher, Microsoft Word, or another publishing tool. The assignment should include in text citations and a list of references. Plagiarism is NOT allowed.

## Diet Analysis:

A diet analysis will be performed for an athlete. "Athlete" is defined as anyone competing at a high amateur level (or higher), including collegiate and high school level athletics. The athlete may not be currently taking this course. Students unsure about whether or not their "athlete" meets the definition should get approval from the professor. Students will need to find an athlete willing to record food intake and activity for 3 consecutive days (2 weekdays and 1 weekend day). Use a diet analysis tool such as Supertracker to analyze the athlete's diet. Include physical activity in the online log to ensure adequate caloric intake.

The written assessment should include 1) a detailed description of the athlete, 2) a summary of diet and activity, 3) an in-depth nutritional evaluation, and 4) a discussion of strategies for dietary improvement. The athlete description should cover physical attributes, the sport, the season (e.g. in season or off season), the nature of training, etc. The summary of the diet and activity should be a quick summary of the athlete's caloric intake, including the typical number of meals/snacks consumed, and expenditure, including the typical type and frequency of activity, for the three days. The nutritional evaluation should address the adequacy of caloric intake, the proportion of calories from carbohydrates/fats/proteins, the consumption of vitamins and minerals (at least 3 of each). Compare the athlete's diet to the dietary guidelines. Strategies for improvement should contain no less than two major nutritional goals with three nutritionally focused strategies for attaining each.

Type the analysis paying attention to grammar and using a professional writing style. Include copies of the reports from the diet analysis tool (even if these are only screen shots).

## Pre-Exercise Meal:

Create a pre-exercise meal for the athlete used in the Diet Analysis. Begin with a description of the athlete and the demands of his/her sport. Explain the timing and type of competition. Determine the number of calories and the proportion of carbohydrates, fats and proteins to be consumed prior to competition. Determine foods to be eaten to meet those requirements if the athlete were able to consume foods 3-4 hours prior to competition. Provide an alternative eating plan in case the athlete is not able to eat that early.

## Training Diet:

Using the same athlete as the Pre-Exercise Meal, create a weekly training diet. Determine the number of meals to be consumed by the athlete (breakfast, snack, lunch, pre-training snack, post-training snack, dinner/supper, etc.). Determine the number of calories along with the proportion of carbohydrates, fats and proteins to be consumed by the athlete. Plan 1 week (7 days) of meals for the athlete. You may use the Exchange System to assist in the planning process.

## Carb Loading Diet:

Modify the training diet prepared for the athlete to provide carbohydrate loading recommendations. Determine the adjustment in the percentage of carbohydrates, fats, and protein for each day leading up to competition. Adjust the foods selected so that they meet the adjusted guidelines for each day. Provide a full 7 days of meals.

## Weight Loss/Gain Diet:

Using the same athlete as the Pre-Exercise Meal, determine what changes should be made to the training diet in order for the athlete to gain or lose weight. Converse with the athlete to determine which goal is appropriate for him/her. Adjust the number of calories to be consumed, the calories to be expended, and the percentage of carbohydrates, fats, and protein in the diet accordingly. Provide a full 7 days of meals.

## Nutrition Education Packet:

Create an education packet that could be provided to athletes to educate them regarding smart nutrition practices. Include information regarding macronutrients, water, key micronutrients (at least 5), portion sizes, meal/food timing, and other pertinent information.

All assignments are to be typed and submitted via Blackboard.

## Extra Credit Opportunity

You may bring a snack to class for extra credit. This snack must be approved ahead of time in order to earn points. You may bring a snack up to 3 times during the semester. Each snack will be worth up to 10 extra credit points.

The snack needs to be something generally considered healthy and needs to fit into an athlete's diet. If you cannot "justify" the inclusion of this snack in an athlete's diet, it will not be approved. The snack should not be simply a store bought item that is unwrapped and presented to the class. You need to prepare or make the snack. This can be anything you want. NOTE FOR COVID-19: All snacks need to be packaged individually for classmates to enjoy later, outside of class.

Points will be awarded as follows:

| | |
|---|---|
| Difficulty preparation | 1-4 points |
| Explanation of nutritional value for athletes | 1-4 points |
| Sharing recipe with class | 2 points |

# Late Work Policy:

Any assignment not submitted by the deadline for any reason may be submitted up to 1 week late for a maximum of half credit.

## Tentative Schedule

| Date | Topic and Readings | Assignment |
|---|---|---|
| August 24 | Introduction<br>Nutrition Knowledge Assessment<br>Competency 1 | |
| August 31 | Chapter 1: Energy Nutrients<br>Competency 2 | Federal Attendance Module<br>Week 1 Research Article Due |
| September 7 | **Labor Day** | |
| September 14 | Chapter 2: Vitamins and Minerals<br>Competency 3 | Week 2 Research Article Due |
| September 21 | Chapter 3: Fluids and Electrolytes<br>Competency 4 | Week 3 Research Article Due<br>Diet Analysis Due |
| September 28 | Chapter 4: Ergogenic Aids<br>Competency 5 | Week 4 Research Article Due<br>Ergogenic Aid Brochure 1 Due |
| October 5 | Exchange System<br>Competency 6 | Week 5 Research Article Due |
| October 12 | Chapter 5: GI Function and Energy Delivery<br>Competency 7 | Week 6 Research Article Due<br>Pre-Exercise Meal Due |
| October 19 | Chapter 6: Nutrient and Fluid Timing<br>Competency 8 | Week 7 Research Article Due<br>Ergogenic Aid Brochure 2 Due |
| October 26 | Chapter 7: Oxygen Transport and Utilization<br>Chapter 8: Strategies for Anti-Inflammation and Muscular Health<br>Competency 9 | Week 8 Research Article Due<br>Training Diet Due |
| November 2 | **Exam 1**<br>Chapter 9: Travel<br>Competency 11 | Week 9 Research Article Due |
| November 9 | Chapter 10: High Altitude<br>Chapter 11: Gender and Age<br>Competency 12 | Week 10 Research Article Due<br>Carb Loading Diet Due |
| November 16 | Chapter 12: Body Composition and Weight<br>Competency 13 | Weight Loss/Gain Diet Due |
| November 23 | Chapter 13: Anaerobic Metabolism for High-Intensity Bursts and Power<br>Chapter 14: Aerobic Metabolism for Endurance<br>Chapter 15: Metabolic Needs for Both Power and Endurance<br>Competency 10 | Nutrition Education Packet Due |
| November 30 | Reading Day | |
| December 3 | **(Thursday) Final Exam** 6:00p-9:00p | |

## Bibliography:


Campbell, B.I. & Spano, M.A. (Eds.) (2011). *Science of Strength and Conditioning Series: NSCA's Guide to Sport and Exercise Nutrition.* Champaign, IL: Human Kinetics.

Sizer, F.S. & Whitney, E.N. (Eds.) (2017). *Nutrition Concepts and Controversies* (14th ed.). Boston, MA: Cengage Learning.

Smith-Ryan, A.E. & Antonio, J (Eds.) (2013). *Sports Performance & Performance Enhancing Supplements.* Ronkonkoma, NY: Linus Learning.

# Addenda:

## Privacy & Accessibility Policies:

A comprehensive list of all Privacy and Accessibility policies for software and services on Arkansas Tech's Blackboard server can be found at: https://www.atu.edu/etech/privacy_accessibility.php. While this information is currently accurate, links and policies will change over time.

## Food Insecurity:

The Green and Gold Cupboard exists to fight hunger right here at home by providing healthy, nutritious food to all members of the Tech community, including students, faculty, and staff. Details on how to access this service can be found at: https://www.atu.edu/foodpantry/

## Safety Statement:

Students are required to follow instructor rules, comply with instructions given, and utilize correctly all safety equipment or procedures provided or indicated.

## Title IX:

Arkansas Tech University does not discriminate on the basis of color, sex, sexual orientation, gender identity, race, age, national origin, religion, veteran status, genetic information, or disability in any of our practices, policies, or procedures. If you have experienced any form of discrimination or harassment, including sexual misconduct (e.g. sexual assault, sexual harassment, stalking, domestic or dating violence), we encourage you to report this to the institution. If you report such an incident of misconduct to a faculty or staff member, they are required by law to notify Arkansas Tech University's Title IX Coordinator and share the basic fact of your experience. The Title IX Coordinator will then be available to assist you in understanding all of your options and in connecting you with all possible resources on and off campus. For more information please visit: http://www.atu.edu/titleix/index.php.

Arkansas Tech University adheres to the requirements of the Americans with Disabilities Act in order to prevent barriers to academic accessibility. If you need an accommodation due to a disability, please contact the ATU Office of Disability Services, located in Doc Bryan Student Center, Suite 171, or visit http://www.atu.edu/disabilities/index.php.

# Recommended Syllabus Statement:

Arkansas Tech University does not discriminate on the basis of color, sex, sexual orientation, gender identity, race, age, national origin, religion, veteran status, genetic information, or disability in any of our practices, policies, or procedures. If you have experienced any form of discrimination or harassment, including sexual misconduct (e.g. sexual assault, sexual harassment, stalking, domestic or dating violence), we encourage you to report this to the institution. If you report such an incident of misconduct to a faculty or staff member, they are required by law to notify Arkansas Tech University's Title IX Coordinator and share the basic fact of your experience. The Title IX Coordinator will then be available to assist you in understanding all of your options and in connecting you with all possible resources on and off campus. For more information please visit: http://www.atu.edu/titleix/index.php.

Arkansas Tech University adheres to the requirements of the Americans with Disabilities Act in order to prevent barriers to academic accessibility. If you need an accommodation due to a disability, please contact the ATU Office of Disability Services, located in Doc Bryan Student Center, Suite 171, or visit http://www.atu.edu/disabilities/index.php.

**ARKANSAS TECH UNIVERSITY**
**DEPARTMENT OF MATHEMATICS**
**CLASS SYLLABUS**

STAT 5173/4173 ADVANCED BIOSTATISTICS
Spring 2021

INSTRUCTOR: SCOTT JORDAN
OFFICE: CORLEY 213
PHONE: 968-0657 email: sjordan1@atu.edu

OFFICE HOURS: MWF 10-12

Text: An Introduction to Statistical Methods and Data Analysis, 7th Edition, by Ott and Longnecker. Publisher: Brooks/Cole (CENGAGE)

Text ISBN: 978-1-305-26947-7 or 1-305-26947-0

Software: SPSS(Statistics), Student Version
(Tech does have a free version of SPSS that you can access through the Tech server. I don't think it matters what version of SPSS you get.)

Purpose: To prepare applied science majors to handle most data set using current statistical procedures.

Catalog Description: This course will include topics in analysis of variance, one factor experiments, experimental designs with two or more factors, linear and multiple regression analysis, and categorical data analysis.

Objectives: Students successfully completing this course will be able to:

1. Design and analyze experiments with 2 or more independent samples with respect to a quantitative variable.

2. Use multiple comparison methods to determine which means differ when the null hypothesis is rejected.

3. Understand and explain the relationship among variables by building simple linear and multiple linear regression models.

4. Check the adequacy of the fitted model and estimate and test the regression coefficients. Be able to use variable selection techniques to produce the best subset of independent variables and reduce multicollinearity.

5. Analyze categorical data through the use of contingency tables and logistic regression models.

Assessment Methods:

**Grading:** There will be two exams given throughout the semester, each worth 100 points. The exams will be announced at least one week in advance.

Homework will be assigned and will be worth a total of 100 points

The final exam will be comprehensive and worth 100 points. The date and time will be given towards the end of the semester.

| | |
|---|---|
| 2 EXAMS @ 100 EACH | 200 |
| HOMEWORK GRADE | 100 |
| FINAL EXAM 100 POINTS | 100 |
| TOTAL POINTS | 400 |

GRADING SCALE:

| | |
|---|---|
| 360 - 400 | A |
| 320 - 359 | B |
| 280 - 319 | C |
| 240 - 279 | D |
| BELOW 240 | F |

Policies:

Cheating/plagiarism: If an occurrence of cheating is detected, then I may adjust the grade as appropriate, ranging from a grade penalty on the test or assignment involved to an **F** in the course.

# PE 6063: Current Issues in Coaching and Athletics

**Spring 2021**


Instructor: Gina Kraft, PhD, ATC, CSCS
Office: Hull 108
Phone: 479-968-0431
Email: gkraft@atu.edu


Office Hours: via WebEx at https://atu.webex.com/meet/gkraft
Monday-Thursday from 10:30a.m. - noon or by appointment

Class Time: Online
Class Location: not applicable

## Required Textbook: None

## Additional Materials: Internet access

## Prerequisites:

Admission to the Strength and Conditioning Master's degree program.

## Catalog Description:

This course will afford the student the opportunity to analyze historical and contemporary coaching and athletics Issues and to develop cogent written and oral arguments regarding them.

## Competencies:

The course will prepare students to effectively complete the following:

1. Investigate various sources of sport media to identify, analyze, and discuss controversial C & A issues.
2. Write well-developed and cogent position papers regarding controversial C & A issues.
3. Orally present both sides of an historical or contemporary C & A issue.

## Class Format:

This course will be conducted online via Blackboard.

## Attendance:

University Policy states:

> "Regular class attendance is considered essential if students are to receive maximum benefit from any course. Control of class attendance is vested in the teacher, who has the responsibility

of defining early in each course his/her standards and procedures. A student accumulating an excessive number of unjustifiable absences in a course may be dropped from the course by the instructor with a grade of 'FE.' A student who is dropped from three courses in a semester for unsatisfactory class attendance may be immediately suspended."

As this class is online, the standard attendance policy does not apply. However, students are expected to spend time on Blackboard and working on assignments weekly. Failure to log in to Blackboard for a period of greater than one (1) week will necessitate dropping the class.

## Academic Dishonesty:

Plagiarism or cheating will not be tolerated. Unless permitted to work in groups, all assignments must be completed individually. The university policy for academic dishonesty will be followed.

## Grading:

| Assignment | Number | Points | Assignnment Total | | | |
|---|---|---|---|---|---|---|
| Issue Brainstorm | 4 | 10 | 40 | | | |
| Issue Identification/Support | 6 | 20 | 120 | | | |
| Discussion Board Participation | 9 | 25 | 225 | | | |
| Position Papers | 4 | 50 | 200 | | | |
| Summary Position Presentation | 4 | 30 | 120 | | | |
| | | | | | | |
| Total Points Possible | | | 705 | | | |
| | | | | | | |
| Grading Scale: | | | | | | |
| | 90-100% | A | 634.5 | to | 705 | points |
| | 80-89.9% | B | 564 | to | 634.4 | points |
| | 70-79.9% | C | 493.5 | to | 563.9 | points |
| | 60-69.9% | D | 423 | to | 493.4 | points |
| | Below 60% | F | | below | 423 | points |
| | | | | | | |

## Assignment Descriptions:

### Issue Brainstorm:

This will be a brief WebEx meeting where the student and professor discuss the issue the student is considering using for the next Issue Identification/Support assignment. This will allow us to address whether it seems to be a good topic to carry over into the Position Paper assignment. Additionally, we can discuss any other issues related to class.

These must be completed by 5:00 p.m. on Friday of the week they are due.

### Issue Identification/Support:

From any resource available, identify a new issue that is facing the coaching and athletics world. Watching the news, reading blogs, following strength coaches on social media, and listening to podcasts are all good means of finding new issues.

In order to be “new” the issue must have arisen (or re-arisen) in the past 3 years.

Once the issue has been identified, it needs to be defined. Explain the scope of the issue. This should include a definition of the issue as well as who is impacted by this issue.

This paper should be no less than 2 and no more than 3 pages double spaced in length prior to the works cited.

### Discussion Board Participation:

A Blackboard discussion question will be posed. Post a response to the question. Be sure to cite resources (if utilizing information outside of the Essentials text). The answer should be no less than 300 words. Answers are due by midnight on Wednesday of the week they are due.

Post a response to 3 answers (or other students’ responses). Any response directly to a student’s original answer will be considered a clarification or extension of that original answer. All responses should be respectful, focus on the content of the answer, and be a minimum of 150 words.

### Position Papers:

Begin by clearing stating the issue and briefly defining it. State the pros and cons of the various positions that could be taken regarding the issue. State the position you have personally chosen to follow. Justify this position using research, the positions of others, expert opinion, or other reputable sources.

This paper should be no less than 5 pages double spaced in length prior to the works cited.

### Summary Position Presentation:

Based on the Position Paper, present your position. This will include the pros and the cons of the various sides of the issue. Finish by stating your own position and justifying it to the class. Your presentation should be no less than 7 minutes and no more than 10 minutes in length.

Record your presentation and post the recording to Blackboard. This can be done using any camera and uploading via YouTube. Another option is to use Kaltura or another screen capture tool. The screen capture option works best in conjunction with a PowerPoint or other presentation. Finally, a voice recording can be made in PowerPoint if no other options are available.

**All assignments will be submitted via Blackboard and should follow APA guidelines. All assignments are due by 11:59 p.m. on Sunday of the week they are due *unless otherwise specified in the assignment description.*** Exceptions apply to the Issue Brainstorm and to the initial Discussion Board post.

## Late Work Policy

There is no late work. Plan ahead and complete assignments early. If you have a situation you feel warrants grace, please contact me.

## Potential Course Topics

- "Teaching" vs "coaching"
- Racial bias/discrimination
- Acceptability of "cheating"
- Existential sport psychology
- Use of supplements to enhance performance
- Ethics in athletics
- Role(s) of the Strength and Conditioning Professional
- Importance of certification
- Coaching vs bullying
- Coaching for nutrition
- Parents
- Professor bias for/against athletes
- Licensure for Strength Coaches
- Hazing in athletics
- Pay to play
- Payment for athletes in revenue generating sports
- Others as identified in class (brainstorm sessions or discussion boards)

## Tentative Schedule

| Week | Assignment |
|---|---|
| January 11-17 | **Issue Brainstorm 1** |
| January 18-24 | Discussion Board 1<br>Issue Identification 1 |
| January 25-31 | Discussion Board 2<br>**Issue Brainstorm 2** |
| February 1-7 | Position Paper 1<br>Summary Position Presentation 1 |
| February 8-14 | Discussion Board 3<br>Issue Identification 2 |
| February 15-21 | Discussion Board 4<br>**Issue Brainstorm 3** |
| February 22-28 | Discussion Board 5<br>Issue Identification 3 |
| March 1-7 | Position Paper 2<br>Summary Position Presentation 2 |
| March 8-14 | Discussion Board 6<br>Issue Identification 4 |
| March 15-21 | Discussion Board 7<br>**Issue Brainstorm 4** |
| March 22-28 | **Spring Break** |
| March 29-April 4 | Position Paper 3<br>Summary Position Presentation 3 |
| April 5-11 | Discussion Board 8<br>Issue Identification 5 |

# SCS 6023: Scientific Foundations of Strength and Conditioning

Fall 2017


Instructor: Gina Kraft, PhD, ATC, CSCS
Office: Hull 108
Phone: 479-968-0431
Email: gkraft@atu.edu


Office Hours: Monday – Friday 10:30-11:30am
Monday/Wednesday 1:30-2:30pm

Class Time: online or by appointment
Class Location: N/A

## Required Textbook:

Essentials of Strength and Conditioning, 4th edition, by National Strength and Conditioning Association (published by Human Kinetics)
ISBN-13: 978-1492501626

## Additional Materials:

Calculator
Internet access

## Prerequisites:

Exercise Physiology and Biomechanics/Kinesiology

## Catalog Description:

An advanced and intensive review of the principles of Exercise Physiology, Biomechanics, and Exercise Psychology.

## Course Description:

An advanced and intensive review of the principles of Exercise Physiology, Biomechanics, and Exercise Psychology.

## Competencies:

1. Explain the sliding filament theory as it relates to excitation-contraction coupling.
2. Discuss structure and function of the nervous system.
3. Discuss the key elements of metabolism and bioenergetics.

4. Explain hormonal regulation of exercise.
5. Explain the role of the cardiovascular system during exercise.
6. Discuss the role of the pulmonary system during exercise.
7. Explain the concepts of leverage and mechanical advantage.
8. Explain the length-tension and force-velocity relationships of muscle function.
9. Discuss the concepts of stability and equilibrium and the factors that influence them.
10. Explain how reinforcement and performance feedback can influence performance.
11. Discuss motivational processes and the facilitation of performance.
12. Discuss leadership effectiveness and decision making.
13. Discuss the arousal-performance relationship.

## Class Format:

This class will be conducted online.

## Attendance:

Attendance is online. Students are expected to participate. Failure to participate will have a direct, negative impact on the student's grade.

## Academic Dishonesty:

Plagiarism or cheating will not be tolerated. Unless permitted to work in groups, all assignments must be completed individually. The university policy for academic dishonesty will be followed.

## Grading and Assignments:

### Competency 1:

Address the competency via a video. Submit the video via Blackboard. The video is to describe/explain the competency and will be graded on the content rather than on creativity. However, creativity is welcome. The video design is completely at the discretion of the student.

This assignment is worth 50 points.

### Competency 2:

A Blackboard discussion question will be posed. Post a response to the question. Be sure to cite resources (if utilizing information outside of the Essentials text). The answer should be no less than 300 words. Post a response to 3 answers (or other students' responses). Any response directly to a student's original answer will be considered a clarification or extension of that original answer. All responses should be respectful, focus on the content of the answer, and a minimum of 150 words. Answers and responses should be written from an athlete development perspective.

Answers are worth 10 points and need to be posted by midnight on Monday of the week they are due in order to allow adequate time for responses. Responses are worth 5 points each and are due by midnight on Friday of the week they are due.

### Competency 3:

A Blackboard discussion will be posted. See Competency 2 for guidelines.

### Competency 4:

A list of hormones will be posted in Blackboard. Each student will claim (or be assigned) a hormone to research and evaluate. Two minor hormones may be assigned together. Evaluate the function of the hormone under "normal," or resting, conditions. How does it function? How

does the hormone function during/after exercise? Should athletes work to enhance/suppress the release of this hormone? Address other questions deemed pertinent to the specific hormone. Create a PowerPoint (or use another presentation tool like Prezi, Sway, or Explain Everything) presentation. Use Blackboard Collaborate to record and post the presentation.

The presentation is worth 50 points.

Competencies 5-6: These two competencies will be grouped together in a Blackboard discussion question. See Competency 2 for guidelines.

Competencies 7-8: These competencies will be grouped together. Select an exercise and explain the components of the competencies as the exercise movement is completed. Use a video to accomplish this. Dartfish video, an existing video on YouTube (check the video for correct movement technique), or a video created by the student for this purpose may be utilized.

This assignment is worth 50 points.

Competency 9: A Blackboard discussion will be posted. See Competency 2 for guidelines.

Competencies 10-12: These competencies will be grouped together in a Blackboard discussion question. See Competency 2 for guidelines.

Competency 13: This competency was covered via a discussion during the class meeting during week one. Students who missed this discussion will need to post a response to the Blackboard discussion question.

This assignment is worth 10 points.

Final Exam: For the final exam, all students will submit 5 multiple choice questions and 2 essay questions that represent the learning that has occurred during the semester. Provide answers with your questions. The multiple choice questions will be worth 2 points each while the essay questions will be worth 5 points each.

The exam will be comprised of a representative sample of submitted questions along with questions written by the instructor. It is worth 100 points.

In addition, it will contain some self-reflection questions over the learning in the course that are designed to provide feedback regarding the course. This portion is worth an additional 10 points. These points will be earned based on completion rather than on the content.

**All assignments will be due at 5:00 p.m. on Friday, including the Final Exam.**

**Tentative Schedule**

| DATE | ASSIGNMENT |
|---|---|
| Week 1<br>August 23-26 | Class Orientation Meeting |
| Week 2<br>Aug 27-Sept 2 | |
| Week 3<br>September 3-9 | Competency 1 Video |
| Week 4<br>September 10-16 | Competency 2 Question |
| Week 5<br>September 17-23 | Competency 3 Question |
| Week 6<br>September 24-30 | |
| Week 7<br>October 1-7 | Competency 4 Presentation |
| Week 8<br>October 8-14 | **Fall Break** |
| Week 9<br>October 15-21 | Competencies 5-6 Question |
| Week 10<br>October 22-28 | |
| Week 11<br>Oct 29-Nov 4 | Competencies 7-8 Video |
| Week 12<br>November 5-11 | Competency 9 Discussion |
| Week 13<br>November 12-18 | Competency 10-12 Discussion |
| Week 14<br>November 19-25 | **Thanksgiving Break** |
| Week 15<br>Nov 26-Dec 2 | Competency 13 Discussion |
| Week 16<br>December 3-8 | Final Exam<br>Due by 5:00 p.m. December 8 |

Bibliography:

Brooks, G. A., Fahey, T. D., & Baldwin, K. M. (2005). *Exercise Physiology: Human bioenergetics and its applications* (4th ed.). New York, NY: McGraw-Hill.*

McArdle, W. D., Katch, F. I. & Katch, V. L. (2015). *Exercise Physiolog: Nutrition, energy and human performance* (8th ed.). Baltimore, MD: Wolters Kluwer Health.

Porcari, J., Bryant, C. & Comana, F. (2015). *Exercise Physiology*. Philadelphia, PA: F. A. Davis

Powers, S. K. & Howley, E. T. (2015). *Exercise Physiology: Theory and application to fitness and performance* (9th ed.). New York, NY: McGraw-Hill.

* This is a resource of historical importance.

The professor reserves the right to modify the course at any time. Changes to the syllabus will be made by way of in class announcements as well as Blackboard announcements. No change will be instituted with the intention of penalizing students.

## Recommended Syllabus Statement:

Arkansas Tech University does not discriminate on the basis of color, sex, sexual orientation, gender identity, race, age, national origin, religion, veteran status, genetic information, or disability in any of our practices, policies, or procedures. If you have experienced any form of discrimination or harassment, including sexual misconduct (e.g. sexual assault, sexual harassment, stalking, domestic or dating violence), we encourage you to report this to the institution. If you report such an incident of misconduct to a faculty or staff member, they are required by law to notify Arkansas Tech University's Title IX Coordinator and share the basic fact of your experience. The Title IX Coordinator will then be available to assist you in understanding all of your options and in connecting you with all possible resources on and off campus. For more information please visit: http://www.atu.edu/titleix/index.php.

Arkansas Tech University adheres to the requirements of the Americans with Disabilities Act in order to prevent barriers to academic accessibility. If you need an accommodation due to a disability, please contact the ATU Office of Disability Services, located in Doc Bryan Student Center, Suite 171, or visit http://www.atu.edu/disabilities/index.php.

| | |
|---|---|
| April 12-18 | Discussion Board 9<br>Issue Identification 6 |
| April 19-25 | Position Paper 4 |
| April 27-30 | **Final Exam (time and date yet to be determined)**<br>https://www.atu.edu/academics/examschedule.php<br>Summary Position Presentation 4 |

**SCS 6083: Instructional Strategies for Strength Coaches**
**Fall 2020**
**Arkansas Tech University**
**Department of Health and Physical Education**
**Dr. Michael Waller USAW-L2, CSCS, NSCA-CPT, FNSCA**
**Phone: 479-964-0526**
**E-mail: mwaller3@atu.edu**
**Office Hours: M and W 9am-12pm; or by Appointment**
**My door is always open, unless I am meeting with another student.**

**Prerequisites:**

Admission to the Strength and Conditioning Master's degree program.

## COURSE DESCRIPTION:

This course focuses on effective sport pedagogy. Students will gain experience in a range of pedagogical skills including designing learning experiences, task presentation, content analysis, strategies for developing the learning environment, assessment of athlete/client performance, and systematic observation techniques for analyzing and improving teaching.

## CATALOG DESCRIPTION

Same as course description

**General Education Guidelines: Not applicable**

## REQUIRED TEXTBOOK

Sabock, MD and Sabock, RJ. (2017) Coaching: A realistic perspective, 11$^{h}$ ed. Rowman and Littlefield, Lanham, MD. ISBN: 978-1-4422-7070-1 / Electronic: 978-1-4422-7071-8

## COMPETENCIES:

The students will:

1. articulate his/her philosophy of teaching/coaching.
2. describe effective instruction in physical activity.
3. define the components that comprise sport pedagogy.
4. identify and describe Mosston's Spectrum of Teaching Styles.
5. develop a classroom/weight room management plan integrating behavior management strategies useful in establishing effective classroom/weight room management.
6. describe factors that influence learning and identify the role of the teacher/coach in manipulating those factors.
7. develop and implement effective lesson plans for peer teaching episodes using Mosston's Spectrum of Teaching Styles.
8. identify and implement systematic observation techniques to improve his/her teaching/coaching skills.
9. participate in the peer coaching cycle to improve planning, instructional, and observational skills.
10. analyze peer teaching/coaching episodes through the use of video and appropriate systematic observation tools.
11. demonstrate effective interpersonal skills in kinesiology instruction.

12. identify and discuss legal issues associated with teaching/coaching strength and conditioning activities (legal liability, negligence, state and federal regulations)
13. Develop an assessment system.

**"Students are required to follow instructor rules, comply with instructions given, and utilize correctly all safety equipment or procedures provided or indicated."**

**COURSE PROCEDURES AND EXPECTATIONS**

1) Professional job expectations include the fact that you will complete ALL work "on time." This course should be treated the same, as it is a direct link to your future professional success.
2) I expect you to work hard every day and I expect you to respect and help each other during the course.
3) Athletic apparel should be worn during gymnasium and weight-room sessions. This
4) You will need access to a computer, the web, and a word processing program for course assignments.
5) **ALL WRITING ASSIGNMENTS:** For credit, assignments must be typed, Times New Roman font, double-spaced, 12-point font size, and in APA format reference section and in-text citations. In addition, assignments should be clearly typed, grammatically correct, and free from spelling errors. **NO LATE ASSIGNMENTS WILL BE ACCEPTED.** Exceptions will be made on an individual basis, and only with documented medical emergencies and/or in accordance with University excused absence policies. Assignments are due at the **beginning** of the class or at the set due date/time and will not be accepted as email attachments unless otherwise approved in advance. Late assignments (i.e., an assignment is late if it is turned in after class has begun on that day or after the due date) will only be accepted under unusual circumstances* and if the instructor is notified in a prompt manner. If the instructor is **NOT** notified of such circumstances in a timely manner, the student will receive a "0" grade for the assignment.
6) **Assignments must reflect original work. Although problem-solving in groups is recommended, students may not turn in assignments that are identical to one another. Assignments turned in by students that have large volumes of information that are identical to each other constitutes a violation of the Student Code, and will receive no credit. (See PLAGIARISM Section)**
7) Students will not be allowed to take the course if the required prerequisites have not been completed.
8) Students are responsible for knowing the registration, drop and withdrawal dates for the semester. *Examples of unusual circumstances include a death in the *immediate* family, illness that requires medical treatment (documentation will be requested) or an emergency that your attention is required. Computer and/or printer error on the day an assignment is due is NOT considered an unusual circumstance. University-sponsored trips and/or functions are considered excused absences.

**STUDENT RESPONSIBILITIES**

1) Students are required to follow instructor rules, comply with instructions given, and utilize correctly all safety equipment or procedures provided or indicated.

2) Respect for the in-class members and the professor. **All electronic communications devices including cell phones will be placed in a designated are or will be turned off during class and placed in your bag (See CELL PHONE / I-PHONE POLICY).** Students who are texting, playing games, sleeping or being disruptive distract those who are trying to listen and participate, will be dismissed from the course and counted as unexcused absence. If you are tired or feel the need to use your phone leave the classroom and return when you are finished. It will be your responsibility to ask your classmates to assist you with the material missed.
3) During any activity portion of the course, students are expected to use respectful language and support their classmates regardless of size, shape or abilities.
4) Dress appropriately for the practical portion of class. For your safety and respect for others, please wear modest, comfortable clothing. Shoes, preferably tennis shoes, must be worn at all times. Professional attire is mandatory when working with clients and examples of professional attire is warm-up pants, clean shorts, and collared shirts. If profane or clothing that is not preapproved, then the student will lose a full letter grade for the hands-on portion of the course.
5) None of the information provided in lecture or discussion is meant to be offensive or discriminatory. Some issues may be sensitive for you personally, but the discussion is not intended to single out anyone. *** If you have any condition that requires special accommodations in testing or class structure, please advise the instructor at the beginning of the semester so that appropriate action can be taken. ***

**PLAGIARISM**

Plagiarism is the presenting of others' ideas as if they were your own. When you write an essay, create a project, do a project, or create anything original, it is assumed that all the work, except for that which is attributed to another author or creator is your own work. Be aware that word-for-word copying is not the only form of plagiarism. ***Plagiarism and academic dishonesty will be reported and investigated, and will result in not less than a 0 for the assignment and could result in automatic failure of the course.***

Plagiarism is considered a serious academic offense and may take the following forms:

1) Copying word-for-word from another source and not giving that source credit.
2) Cutting and pasting from an Internet or database source without giving that source credit.
3) Paraphrasing the work of another and not giving that source credit.
4) Adopting a particularly apt phrase as your own.
5) Reproducing any published or copyrighted artwork, both fine and commercial.
6) Digitally duplicating or downloading any copyrighted software, programs or files.
7) Paraphrasing another's line of thinking in the development of a topic as your own.
8) Receiving excessive help from a friend or elsewhere, or using another project as your own.
9) Insufficient or omitting information for references

[Adapted from the Modern Language Association's MLA Handbook for Writers of Research Papers. New York: MLA, 1995: 26.]

**Academic Dishonesty.** Dishonesty of any kind with respect to examination or course assignments shall be considered cheating. The penalty for academic dishonesty shall be "0" points for all related material and assignments related to the incident.

**ATTENDANCE POLICY (**University Policy states**):**
"Regular class attendance is considered essential if students are to receive maximum benefit from any course. Control of class attendance is vested in the teacher, who has the responsibility of defining early in each course his/her standards and procedures. A student accumulating an excessive number of unjustifiable absences in a course may be dropped from the course by the instructor with a grade of 'F.' A student who is dropped from three courses in a semester for unsatisfactory class attendance may be immediately suspended."

1) Class Attendance and Participation. **Attendance is required (See University Policy)**, and there are very few good excuses for being absent. If you are going to be absent, make every effort to contact the instructor beforehand. Absences are more likely to be excused if you have proof of the excuse from medical provider.
2) Missed in-class assignments or exams for excused absences during the semester will need to be made up based on the instructor's availability. These make-ups will occur within 2 weeks upon the student's return to class.
3) **All quizzes will be given at the beginning of class to ascertain attendance and reinforce learning. Quizzes will not always be given but if a quiz is performed, no late or make-up quizzes will be given.**

**More than 3 unexcused absences will result in a full grade deduction from your final grade for each additional offense. Four unexcused absences = 1 grade deduction, 5 unexcused absences = 2 grade deductions, etc. This policy will be strictly enforced!**

**CELL PHONE / I-PHONE POLICY**
Students must silent all cell phones, i-phones, and pagers while in class and place them in the designated area. If you are seen using these devices you will be asked to leave the classroom, 5 points deducted from overall points, and will be counted as an absence. Computer laptops and tablets may be used for note taking only but if used for emailing or purposes other than the current class you will be asked to leave the classroom and will be counted as an absence.

**Title IX of the Education Amendments of 1972 prohibits sex discrimination in educational programs and activities.**

*"No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance."*
- 20 U.S.C. § 1681 & C.F.R. Part 106
Sexual misconduct constitutes sexual discrimination and is prohibited by Title IX.
Sexual misconduct is any sexual act which violates the criminal laws of the State of Arkansas or laws of the United States including but not limited to sexual assault (non-consensual sexual contact or intercourse), domestic violence, dating violence, stalking, and sexual exploitation.
The Title IX Coordinator oversees the university's compliance with Title IX of the Education Amendments of 1972. The Title IX Coordinator works with university administration, departments, students, faculty, staff, campus police and other support services to ensure that university policies and programs foster a campus community free of illegal gender discrimination and sexual violence.

Jennifer Fleming
Title IX/Affirmative Action Coordinator
President's Office
Administration Building, Room 212
1509 N Boulder Ave.
Russellville, AR 72801
Phone: (479) 498-6020
Fax: (479) 880-4430
Email: jfleming@atu.edu

**TRIO – STUDENT SUPPORT SERVICES**

"Student Support Services (SSS) is all about student achievement and success. Our goal is to help you succeed at Arkansas Tech University, help you attain graduation with a bachelor's degree, and gain the necessary skills to either enter the work force or enter graduate or professional school."

Student Support Services
Brown Hall
105 West O Street, Suite 345
Russellville, AR 72801
Phone: (479) 880-4172
Fax: (479) 880-4239
trio.sss@atu.edu

**Grading Scale (%)**

**Grading is based on the acceptable completion of quizzes, laboratories, exams and the analysis all of which contribute to the accumulation of total points.**

100%-90% = A 89%-80% = B 79%-70% = C 69%-60% = D <59% = F
Final grade will be cumulative on all components of the class.

**SEE COURSE OUTLINE**

**Bibliography**


1. Cook, MJ. Effective coaching. McGraw-Hill. New York, NY. 1999. (Historical Context)
2. Martens, R. Successful coaching, 4th ed. Human Kinetics. Champaign, IL. 2012.
3. Rodger, JL, project coordinator. USA Track & Field coaching manual. Human Kinetics. Champaign, IL. 2000. (Sport Specific Coaching) + (Historical Context)
4. Roethlingshoefer, J and McConnell, D. Intent: A practical approach to applied sport science for athletic development. Justin Roethlingshoefer and Devan McConnell. 2018. ISBN-13: 978-1-946702-09-8

**Presentation Rubric**

| Task | Criteria | Low Standards | Moderate Standards | High standards | Pts |
|---|---|---|---|---|---|
| 1. Attire | Dresses for occasion | Shorts, t-shirts, shower shoes, stained or torn clothing | Clean jeans/warm-up suit, collared athletic shirt, casual work or athletic shoes | Nice slacks/skirt, button-up shirt or sweater, dress shoes/boots | 5 |
| 2. Mannerisms | Volume, speed, & clarity, poise | Reads presentation from notes or slides, mumbles, difficult to hear, multiple gestures or expressions unrelated to presentation | Speaks clearly at adequate volume, rushes, pauses or makes gestures or expressions unrelated to presentation, ie: um, uh | Clear, relaxed speech throughout, uses speech effectively to emphasize main points, few nervous gestures/expressions , use of eye contact. | 5 |
| 3. Use of technology | Uses PowerPoint | Disorganized, repetitive, includes every word of presentation in slides | Slides are concise, organized, minimal repetition | Additional details in slide background, transitions, etc | 5 |
| 4. Additional materials | Hand-outs, photos, charts, video, graphics | None observed | 2-4 observed (may be included in ppt) | 5 or more observed (may be included in ppt) | 10 |
| 5. Vocabulary | Correct terminology | Frequent use of slang/text expressions, no explanation of specific terms | Occasional use of slang, explains program specific terms | Professional vocabulary & terminology used throughout | 10 |
| 6. Writing errors in slides | Spelling, grammar, punctuation, word use | > 6 errors noticed | 4-6 errors noticed | 1-3 errors noticed | 10 |
| 7. Timeframe | Length of class time | Unsuccessfully utilized entire class time (≤ 75% of class time) | Completed >75% but < 90% of class time | Effectively used class time and disseminated information | 10 |
| 8. Answered questions | Asks for questions, answers questions | Unable to answer or unclear, incorrect answers for 50% of questions | Rambling when answering, answered 75% | Clear, direct answer to all questions, and answered 100% | 5 |
| 9. Content | Accuracy of information | Information was general; lack of peer-review support; did not address topic | Information had only < 3 professional and 3 peer-review references; presented 50% topic | Information had > 3 professional and >3 peer-review references; presented topic | 40 |

**Labs and writing assignments will be evaluated based on the following criteria.**
**Note: Points will be adjusted to fit scoring scale**

| Criteria | Exceptional | Meets Expectations | Needs Improvement | Unacceptable |
|---|---|---|---|---|
| Following Instructions: *(For reviews and research) Introduction Methods Results Discussion Application* (15 points) | Introduction of the topic, methods or body topic, conclusion and application of topic, tables and figures are adequately and appropriately used. 1-3 errors | 4-6 errors | 7-9 errors | >10 errors |
| Content (45 points) | The material is well-organized and covers all key points & sub-points with a significant amount of detail & clearly delineated. | The material is organized and covers 70-90% of a key point(s). 1-2 elements do not relate to topic. 4-6 errors | The material covers 50-69% of a key points, minimal details, some points are unclear/incorrect. 7-9 errors | The material is missing many of a key points, thoughts are scattered, and incorrect details. >10 errors |
| Professional writing (35 points) | There are less than 3 errors (See guidelines Below) | There are 4-6 errors | There are 7-9 errors | There are >10 errors |
| Paper Presentation (5 points) | Neatly typed and uniformly formatted. The assignment has a very attractive and usable layout. It is easy to locate all important elements | Neatly typed, uniformly formatted and usable layout. Difficulty locating all important elements | Inconsistency in typing, format and difficulty locating all important elements. | Poorly formatted and the important elements are incoherently placed in the assignment. |

Professional writing: Proper word selection, spelling, punctuation, grammar or syntax in the assignment or project, sentence structure, sentence & paragraph flow, sentence & paragraph transition, Times New Roman, 12 font, and double spaced. Spelling.

*Note: The syllabus is not a binding legal contract. It may be modified by the instructor when the learner is given reasonable notice of the modification, particularly when the modification is done to rectify an error that would disadvantage the learner.*

**SCS 6083: Instructional Strategies for Strength Coaches**
**Spring 2020**
**Arkansas Tech University**
**Department of Health and Physical Education**
**Dr. Michael Waller USAW-L2, CSCS, NSCA-CPT, FNSCA**
**Phone: 479-964-0526**
**E-mail: mwaller3@atu.edu**
**Office Hours: M and W 9am-12pm; or by Appointment**
**My door is always open, unless I am meeting with another student.**

**Prerequisites:**

Admission to the Strength and Conditioning Master's degree program.

## COURSE DESCRIPTION:

This course focuses on effective sport pedagogy. Students will gain experience in a range of pedagogical skills including designing learning experiences, task presentation, content analysis, strategies for developing the learning environment, assessment of athlete/client performance, and systematic observation techniques for analyzing and improving teaching.

## CATALOG DESCRIPTION

Same as course description

## REQUIRED TEXTBOOK

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### Grading Scale (%)

**Grading is based on the acceptable completion of quizzes, laboratories, exams and the analysis all of which contribute to the accumulation of total points.**

100%-90% = A 89%-80% = B 79%-70% = C 69%-60% = D <59% = F
Final grade will be cumulative on all components of the class.

## COURSE TOPICS AND OUTLINE

I. Coaching Philosophy and Personality (Chapters 1-3)
  A. What is your Coaching Philosophy?
  B. How does your Personality fit?
    1. Authoritative, Disinterested…
  C. Why do you want to be a coach?
    1. Interested, Challenge…
  D. Components of Sport Pedagogy.

II. Coaching Development (Chapters 4-7)
  A. Coaching Education
  B. Coaching hierarchy and relationships
  C. Directors, Head, Assistants and support staff
  D. Resume, internship/experiences, and interviewing

III. Planning for S&C, Athlete Development, Seasonal (Chapters 8-10)
   A. Develop and implement effective Coaching plans (e.g. peer coaching)
      1. Observation and analysis of coaching skills
      2. Demonstrate effective interpersonal coaching skills
      3. Coaching exercises and skills.
   B. S&C Session Management and Athlete Behavior
      1. Weight room, Gym, Track, Court, Field
      2. Athlete flow, safety, guidelines/rules
      3. Discipline, team atmosphere…
   C. Factors that influence learning of strength and conditioning skills
      1. Travel and Home

IV. Chapter 11
   A. Legal issues associated with strength and conditioning activities
   B. Liability, negligence, state and federal regulations
   C. Athlete safety, medical cooperation…

**ASSIGNMENTS AND EXAMS**

***All assignments due at beginning of class.***

| | |
|---|---|
| Philosophy of Coaching Statement– Due SEP 2 | 75 pts. |
| Presentation of Coaching Philosophy– Due SEP 2 | 25 pts. |
| Coaching and Analysis | |
| A. Weight Room Coaching – Due OCT 14 | 100 pts. |
| B. Outdoor Field Coaching – Due OCT 28 | 100 pts. |
| Coaching Literature Review | |
| A. Review #1 – Due SEP 23 | 100 pts. |
| B. Review #2 – Due NOV 4 | 100 pts. |
| Coaching Assessment/Modeling – Due NOV18 | 100 pts. |
| Final Exam (Cumulative from textbook on Exam Day) | 100 pts. |
| Total | 700 pts |

**ARTICLES:**

You will be tasked to acquire PEER REVIEWED articles outside of the ones provided to you on Blackboard™ for the completion of assignments and lab write-ups. Use of non-peer reviewed articles (web articles from www.livestrong.com, www.bodybuilding.com, www.elitefts.com, www.crossfit.com, www.ymca.net, etc. are not acceptable sources for articles use as these are not peer-reviewed articles) will result in 2-point deductions for EACH OCCURRENCE. It would be advisable to ask the instructor if your article is peer-reviewed and the correct referencing format is used prior to turning in your completed assignment. Take the time to read the article and if you are unsure or require clarity of a statement please do not hesitate to ask the instructor.

**Examples:**

Brown JR, Alsarraf BJ, Waller M, Eisenman P, and Hicks-Little CA. (2014) Rotational Angles and Velocities During Down the Line and Diagonal Across Court Volleyball Spikes. International J Kines Sports Sci. 2(2): 1-8.

Siff MC. (2000) Biomechanical Foundations of Strength and Power Training. In, Biomechanics in Sport: Performance enhancement and injury prevention. Ed. Zatsiorsky VM. Oxford, England: Blackwell Science Ltd; Pp. 103-142.
Waller M, Townsend R, and Gattone M. (2007) Application of the power snatch for athletic conditioning. Strength Cond J. 29(3):10-20.

**Coaching Philosophy Paper 75 pts.**
Each student will develop a philosophy of coaching that is specific to the profession of strength and conditioning. This manuscript should be in-depth and explain the why and how of your philosophy. A mission statement or elevator speech is only 3 to 5 sentences while a philosophy provides a person (e.g. athlete) with details on what type of programming will be taking place, why the program is developed in that manner and what the expectations are of the athletes. The paper will be 1½ to 2 pages in length, typed, word processed, Times New Roman, 12pt font and single spaced.

**Coaching Philosophy Presentation 25 pts.**
Your coaching philosophy will be presented, along with an accompanying mission statement, and have an elevator speech ready to share with the class. You will have 5-minutes to present this information in a format of your choosing, which means it can be freestyle, use PowerPoint, or c-map, freedom is yours. Moreover, you do not have to dress for this presentation as we are going to discuss as a class what you present.

**Coaching and Analysis 100 pts x 2 = 200 pts.**
Each student will develop strength and conditioning sessions based on coaching in the weight room and outdoor environments for 2 different sports. The students will present which coaching methods they will use in the programs to the class describing how these will be effective in their ability to deliver an effective session. The objectives of the presentations are to have an effective program and the explanation of what coaching methods will be used (e.g. small groups and "high level" of mental stress) along with why they are used. The exercises, volume and intensity are secondary only used as a guide so others can understand what, why, and how the session will progress. A 2 to 3-page written analysis of each coaching session will be submitted explaining the coaching methods with proper citations (5 peer-reviewed minimum). You will use 10-minutes (± 30 s) to present this information in a PowerPoint format and submit the paper at the beginning of class in hard copy format.
Sport Selection: Lacrosse, Rugby, Skeleton, Men's Field Hockey, Women's Ice Hockey, Beach Volleyball, Cross Country Running, Biathlon (Winter), Long and Triple Jumper, Wrestling, Golf

**Coaching Literature Reviews 100 pts x 2 = 200 pts.**
Articles may be assigned by the instructor or may be selected by the student (with instructor approval) will be read, reviewed in a 3 to 8-page manuscript, and there will be a 5-minute discussion in class regarding your reviews. These articles will be related to coaching, and applied to the profession of athletic strength and conditioning. You will select a minimum of 5 articles that will be related to coaching psychology, pedagogy, athlete return to play mental considerations, travel planning, and leadership. The topic focus of the two reviews will be different from each other and will use different articles for each review.

**Coaching Assessment/Modeling 100 pts.**
Each student present how they would set-up, coach and correct technique errors for a specific skill/exercise they will be assigned. You will describe how you would coach the skill/exercise to a team so prepare appropriately to get familiar with the area and skill/exercise to be coached. The goal is for you to develop and refine coaching skills based on feedback from the instructor and classmates. A 2 to 3-page description of skill/exercise and coaching technique used will be submitted with proper citations (2 peer-reviewed citations minimum). 50 points will come from the coaching presentation and 50 points will come from your manuscript.
Coaching Rubric:

1. All technique points for strength and conditioning drill/exercise covered (15 points)
2. Athlete errors are noted and corrected (10 points)
3. Coaching dynamically involved (e.g. observes varying angles). (10 points)
4. More than one teaching/coaching method is used (e.g. Mosston) (10)
5. Coach uses a clear, loud, concise voice, while maintaining professionalism. (5 points)

**Presentation Rubric**

| Task | Criteria | Low Standards | Moderate Standards | High standards | Pts |
|---|---|---|---|---|---|
| 1. Attire | Dresses for occasion | Shorts, t-shirts, shower shoes, stained or torn clothing | Clean jeans/warm-up suit, collared athletic shirt, casual work or athletic shoes | Nice slacks/skirt, button-up shirt or sweater, dress shoes/boots | 5 |
| 2. Mannerisms | Volume, speed, & clarity, poise | Reads presentation from notes or slides, mumbles, difficult to hear, multiple gestures or expressions unrelated to presentation | Speaks clearly at adequate volume, rushes, pauses or makes gestures or expressions unrelated to presentation, ie: um, uh | Clear, relaxed speech throughout, uses speech effectively to emphasize main points, few nervous gestures/expressions , use of eye contact. | 5 |
| 3. Use of technology | Uses PowerPoint | Disorganized, repetitive, includes every word of presentation in slides | Slides are concise, organized, minimal repetition | Additional details in slide background, transitions, etc | 5 |
| 4. Additional materials | Hand-outs, photos, charts, video, graphics | None observed | 2-4 observed (may be included in ppt) | 5 or more observed (may be included in ppt) | 10 |
| 5. Vocabulary | Correct terminology | Frequent use of slang/text expressions, no explanation of specific terms | Occasional use of slang, explains program specific terms | Professional vocabulary & terminology used throughout | 10 |
| 6. Writing errors in slides | Spelling, grammar, punctuation, word use | > 6 errors noticed | 4-6 errors noticed | 1-3 errors noticed | 10 |
| 7. Timeframe | Length of class time | Unsuccessfully utilized entire class time (≤ 75% of class time) | Completed >75% but < 90% of class time | Effectively used class time and disseminated information | 10 |
| 8. Answered questions | Asks for questions, answers questions | Unable to answer or unclear, incorrect answers for 50% of questions | Rambling when answering, answered 75% | Clear, direct answer to all questions, and answered 100% | 5 |
| 9. Content | Accuracy of information | Information was general; lack of peer-review support; did not address topic | Information had only < 3 professional and 3 peer-review references; presented 50% topic | Information had > 3 professional and >3 peer-review references; presented topic | 40 |

**Labs and writing assignments will be evaluated based on the following criteria.**
**Note: Points will be adjusted to fit scoring scale**

| Criteria | Exceptional | Meets Expectations | Needs Improvement | Unacceptable |
|---|---|---|---|---|
| Following Instructions: *(For reviews and research) Introduction Methods Results Discussion Application* (15 points) | Introduction of the topic, methods or body topic, conclusion and application of topic, tables and figures are adequately and appropriately used. 1-3 errors | 4-6 errors | 7-9 errors | >10 errors |
| Content (45 points) | The material is well-organized and covers all key points & sub-points with a significant amount of detail & clearly delineated. | The material is organized and covers 70-90% of a key point(s). 1-2 elements do not relate to topic. 4-6 errors | The material covers 50-69% of a key points, minimal details, some points are unclear/incorrect. 7-9 errors | The material is missing many of a key points, thoughts are scattered, and incorrect details. >10 errors |
| Professional writing (35 points) | There are less than 3 errors (See guidelines Below) | There are 4-6 errors | There are 7-9 errors | There are >10 errors |
| Paper Presentation (5 points) | Neatly typed and uniformly formatted. The assignment has a very attractive and usable layout. It is easy to locate all important elements | Neatly typed, uniformly formatted and usable layout. Difficulty locating all important elements | Inconsistency in typing, format and difficulty locating all important elements. | Poorly formatted and the important elements are incoherently placed in the assignment. |

Professional writing: Proper word selection, spelling, punctuation, grammar or syntax in the assignment or project, sentence structure, sentence & paragraph flow, sentence & paragraph transition, Times New Roman, 12 font, and double spaced. Spelling.

*Note: The syllabus is not a binding legal contract. It may be modified by the instructor when the learner is given reasonable notice of the modification, particularly when the modification is done to rectify an error that would disadvantage the learner.*

**Letter Grades:**

**A = 90-100%**
**B = 80-89.99%**
**C = 70-79.99%**
**D = 60-69.99%**
**F = Below 60%**

# SCS 6093: Exercise Science Seminar

Fall 2018


Instructor: Gina Kraft, PhD, ATC, CSCS

Office: Hull 108

Phone: 479-968-0431

Email: gkraft@atu.edu


Office Hours: Monday/Tuesday/Thursday 9:30 a.m. to 11:30 a.m. or by appointment

Class Time: Tuesdays 6:00p – 9:00p

Class Location: Hull 115

Required Textbook: None.

Recommended:

Essentials of Strength and Conditioning, 4th edition, by National Strength and Conditioning Association (published by Human Kinetics)


ISBN-13: 978-1492501626


## Additional Materials:

Internet access

## Prerequisites:

Acceptance into the graduate program.

## Catalog Description:

This course is designed to enhance the student's ability to critically analyze and evaluate contemporary strength and conditioning literature.

## Competencies:

1. Demonstrate the ability to perform a literature search and review related to the field of strength and conditioning.
2. Read and comprehend contemporary strength and conditioning scholarly literature.
3. Write reaction papers that critique strength and conditioning peer-reviewed articles and popular books.

## Class Format:

This class will be conducted online with monthly face to face meetings.

## Attendance:

University Policy states:

> "Regular class attendance is considered essential if students are to receive maximum benefit from any course. Control of class attendance is vested in the teacher, who has the responsibility of defining early in each course his/her standards and procedures. A student accumulating an excessive number of unjustifiable absences in a

course may be dropped from the course by the instructor with a grade of 'FE.' A student who is dropped from three courses in a semester for unsatisfactory class attendance may be immediately suspended."

Students are expected to participate. Failure to participate will have a direct, negative impact on the student's grade. Students are expected to attend all face to face meetings. If you are unable to physically attend, arrangements may be made via Skype or another online tool for you to be "present."

Missing more than 2 class periods will result in the loss of a letter grade. Every absence after that will result in the loss of half a letter grade.

## Academic Dishonesty:

Plagiarism or cheating will not be tolerated. Unless permitted to work in groups, all assignments must be completed individually. The university policy for academic dishonesty will be followed. Any assignment submitted via Turnitin that yields a similarity report of greater than 25% will be considered to be plagiarized. That assignment will receive an score of 0.

## Assignments:

### Weekly Article Critiques:

Each week, students will critically evaluate 2 current research articles. Articles must have been published within the last 10 years. A list of kinesiology related journals is provided later in this document. The article must be related to topics in the field of strength and conditioning.

Students may use the PEDro scale (provided in Blackboard) to guide their criticism but should avoid mentioning the PEDro scale in the paper. The PEDro scale tool should not be the limit to the criticism. In this sense, criticism simply means critical evaluation. This paper should focus on strengths of the research article as well as weaknesses. For example, it may point out strong aspects of the study design and the ways in which the authors worked to limit bias. Use a professional writing style, such as found in journals in the field. Critiques should be no less than 2 pages double-spaced.
This assignment should follow the following format:

| |
|---|
| Summary: This is where you will provide no more than a page summarizing the article.<br><br>Critique: This is where you will provide your critical evaluation of the article. This should be no less than a page.<br><br>Citation: Use APA format.<br>PEDro Score: Provide the score you assigned to the article here. ___/11 |

Each will be worth 10 points.

### Face to Face Article Discussion:

During the Face to Face meetings, each student should be prepared to discuss their article summaries. The number of summaries covered will depend on the number of weeks between meetings. Be ready to share the summary and main points of the critique with the course. Be familiar with the PEDro scale in order to help provide critical feedback to other students. Active involvement in the discussion is expected.

Each session will be worth 20 points.

### Podcast Summary:

Students must follow a podcast throughout the semester. A summary of the key discussion points on the podcast will be provided at each Face to Face class meeting. The podcast should be published at least every other week. If the podcast is less frequent than this, students will need to select a second podcast to follow. The selected podcast(s) must be approved. Some suggested podcasts are listed below.

Each podcast summary will be worth 10 points.

*Suggested Podcasts:*

- CVASPS (Central Virginia Sports Performance Seminar)
- Complementary Training
- Just Fly Performance Podcast
- NSCA Coaching Podcast
- Pacey Performance Podcast
- Scientific Strength with Scott Iardella
- Starting Strength Podcast
- Strength and Conditioning Journal Podcast
- The Strength Coach Podcast

Book Review: Students must read 1 book during the semester and provide a review of each. The review should be approached as if it will be published in a prominent journal in the field. It needs to highlight the strengths and weaknesses of the text as well as bring to light any unconventional arguments made by the text, especially if these are contradictory to current practice in the field. The book review should be no less than 2 pages and no more than 4 pages double-spaced.

Book selection must be approved. No titles will be allowed to be duplicated, so approval will be granted on a first come, first served basis. Approval solicitation should be made via the discussion board in BlackBoard.

*Suggested Titles:*

- Advances in Functional Training by Michael Boyle
- Athletic Body in Balance by Gray Cook
- Becoming a Supple Leopard 2nd ed. By Kelly Starrett and Glen Cordoza
- Conditioning Young Athletes by Tudor Bompa and Michael Carrerrra
- Functional Training by Carlos Santana
- The Lore of Running 4th ed. by Tim Noakes
- Movement Functional Movement Systems by Gray Cook
- NASM Essentials of Corrective Exercise Training by National Academy of Sports Medicine
- The Natural Method: Georges Herbert's Practical Guide to Physical Education by Georges Herbert and Phillippe Til
- Periodization: Theory and Methodology of Training 5th ed. By Tudor Bompa and G. Gregory Haff
- Periodization Training for Sports 3rd ed. By Tudor Bompa and Carlo Buzzicchelli
- Sports Nutrition & Performance Enhancing Supplements by Abbie E. Smith-Ryan and Jose Antonio
- Triphasic Training: A systematic approach to elite speed and explosive strength performance by Cal Dietz and Ben Peterson

This will be worth 100 points.

Face to Face Book Review Discussion: During the Face to Face meetings, each student should be prepared to discuss their book review. Summarize the book. Discuss the strengths and weaknesses of the book. Also, provide at least to questions you have for the authors for clarification or follow-up information.

As this is a discussion, be prepared to ask classmates 2 questions about each of their books.

Discussions will be worth 20 points.

Literature Search: Find 10 articles on a topic related to the field of strength and conditioning. Up to 7 of the articles may be (or may have been) used for Article Critiques while the remaining 3 articles must be new to you. (You may use more than 7 articles used for Article Critiques as long as you still provide 3 new articles.) Submit a bibliography page listing all articles. Denote those new for Article Critiques with an asterisk at the end of the citation. Use APA format for all citations.

There will be 3 of these throughout the semester. Each will be worth 20 points.

Literature Review: Using the 10 articles submitted for the Literature Search, write a paper summarizing current research on your topic. Use APA format and in text citations. This paper should not be a summary of 10 separate articles, rather it should synthesize the findings of the articles into a coherent story with commonalities between and differences among the articles being highlighted.

There will be 3 of these throughout the semester. Each will be worth 100 points.

Face to Face Literature Review Discussion: During the Face to Face meetings, each student should be prepared to discuss their Literature Review. Provide the key points of the literature review to the class. Be prepared to ask classmates a minimum of 2 questions regarding their literature reviews.

Discussions will be worth 20 points.

Podcast Production: Students will work in groups of 3 or 4 to generate a total of 90 minutes minimum of podcast production. The episodes need to be based in science rather than gym culture; however, considering culture from the perspective of science could be acceptable.

The full production of podcast episodes will be worth 100 points.

**All assignments will be due at 5:00 p.m. on Tuesday of the week they are assigned, including the Final Exam.**

## Grading:

| **Assignment** | **Point Value** |
|---|---|
| Weekly Article Critiques (10 points each) | 260 |
| Article Discussion (20 points each) | 60 |
| Podcast Summary (10 points each) | 50 |
| Book Review (100 points) | 100 |
| Book Review Discussion (20 points each) | 40 |
| Literature Search (20 points each) | 60 |
| Literature Review (100 points each) | 300 |
| Literature Review Discussion (20 points each) | 60 |
| Podcast Production (100 points) | 100 |
| **Point Total** | **1030** |

**Letter Grades:**

**A = 90-100%**
**B = 80-89.99%**
**C = 70-79.99%**
**D = 60-69.99%**
**F = Below 60%**

## Tentative Schedule

| Date | Assignment |
|---|---|
| **Week 1**<br>**August 28** | Class Orientation Meeting<br>Library Introduction |
| **Week 2**<br>**September 4** | Weekly Article Critiques<br>Literature Search 1<br>Podcast |
| **Week 3**<br>**September 11** | Weekly Article Critiques<br>Podcast<br>*Class Meeting* |
| **Week 4**<br>**September 18** | Weekly Article Critiques<br>Podcast |
| **Week 5**<br>**September 25** | Weekly Article Critiques<br>Podcast<br>Literature Review 1 |
| **Week 6**<br>**October 2** | Weekly Article Critiques<br>~~Book Review 1~~<br>Podcast<br>*Class Meeting* |
| **Week 7**<br>**October 9** | Weekly Article Critiques<br>Literature Search 2<br>Podcast |
| **Week 8**<br>**October 16** | Weekly Article Critiques<br>Podcast |
| **Week 9**<br>**October 23** | Weekly Article Critiques<br>Literature Review 2<br>Podcast<br>*Class Meeting* |
| **Week 10**<br>**October 30** | Weekly Article Critiques<br>Podcast |
| **Week 11**<br>**November 6** | Weekly Article Critiques<br>Literature Search 3<br>Podcast |
| **Week 12**<br>**November 13** | Weekly Article Critiques<br>Book Review 2<br>Podcast<br>*Class Meeting* |
| **Week 13**<br>**November 20** | Weekly Article Critiques<br>Podcast |
| **Week 14**<br>**November 27** | Weekly Article Critiques<br>Podcast |
| **Week 15**<br>**December 5** | Final Exam – Literature Review 3<br>Due by 5:00 p.m. December 5<br>*Class Meeting* |

## Late Work Policy:

Any assignment not submitted by the deadline for any reason may be submitted up to 1 week late for a maximum of half credit.

## Alternative Means of Earning Points:

Attend any NSCA, CSCCa, ETSUCC, or other approved conference. Write a summary of each session and include ways that you anticipate incorporating the presented information into your own coaching practice. The length of the summary depends on the length and number of sessions at the conference. You may earn up to 10 points for every contact hour of the conference. A maximum of 200 points may earned in this manner.

## Kinesiology Related Journals:

ACSM's Health & Fitness
Adapted Physical Activity Quarterly
American Journal of Physical Medicine & Rehabilitation
American Journal of Public Health
American Journal of Sports Medicine
Annals of Physical and Rehabilitation Medicine
Applied Physiology, Nutrition, and Metabolism
Archives of Physical Medicine and Rehabilitation
Biology of Sport
British Journal of Sports Medicine
Canadian Journal of Applied Physiology
Canadian Journal of Public Health
Clinical Biomechanics
Clinical Journal of Sport Medicine
Clinical Kinesiology
Clinics in Sport Medicine
Current Reviews in Musculoskeletal Medicine
Current Sports Medicine Reports
Ergonomics
European Journal of Applied Physiology
European Journal of Physical and Rehabilitation Medicine
European Journal of Sport Science
European Physical Education Review
Exercise and Sport Sciences Reviews
Exercise Immunology Review
Gait & Posture
Human Movement Science
Human Performance
International Journal of Athletic Therapy & Training
International Journal of Sport Management and Marketing
International Journal of Sport Nutrition and Exercise Metabolism
International Journal of Behavioral Nutrition and Physical Activity
International Journal of Physical Education
International Journal of Sport Psychology
International Journal of Sports Medicine
International Journal of Sports Physiology and Performance
International SportMed Journal
Isokinetics and Exercise Science
Journal of Aging and Physical Activity
Journal of Applied Biomechanics
Journal of Applied Physiology
Journal of Applied Sport Psychology
Journal of Athletic Training
Journal of Back and Musculoskeletal Rehabilitation
Journal of Biomechanics

Journal of Electromyography and Kinesiology
Journal of the International Society of Nutrition
Journal of Motor Behavior
Journal of Orthopedic & Sports Physical Therapy
Journal of Physical Activity & Health
Journal of Physical Education, Recreation, and Dance
Journal of Physiotherapy
Journal of Rehabilitation Medicine
Journal of Science and Medicine in Sport
Journal of Sport and Exercise Psychology
Journal of Sport and Social Issues
Journal of Sport Rehabilitation
Journal of Sport Management
Journal of Sports Medicine and Physical Fitness
Journal of Sports Science and Medicine
Journal of Sports Sciences
Journal of Strength and Conditioning Research
Journal of Teaching in Physical Education
Journal of the Philosophy of Sport
Kinesiology Review
Knee Surgery, Sports Traumatology, Arthroscopy
Measurement in Physical Education and Exercise Science
Medicine and Science in Sports and Exercise
Medicina Dello Sport
Medicina Sportiva
Motor Control
Movement Disorders
Muscle & Nerve
Pediatric Exercise Science
Perceptual & Motor Skills
Physical and Health Education Journal
Physical Education and Sport Pedagogy
Physical Educator
Physical Therapy
Physical Therapy in Sport
Physician & Sports Medicine
Physiotherapy
Physiotherapy Research International
Physiotherapy Theory and Practice
Psychology of Sport and Exercise
Quest
Research in Sports Medicine
Research Quarterly for Exercise and Sport
Scandinavian Journal of Medicine and Science in Sports
Science and Sports
Sociology of Sport Journal
Sport History Review
Sport in History
Sport Marketing Quarterly
Sport, Education, and Society
Sports Biomechanics
Sports Engineering
Sports Health
Sports Medicine
Sports Medicine and Arthroscopy Review
Strength and Conditioning Journal

The Sport Psychologist
Wilderness and Environmental Medicine

## Bibliography:


Bompa, T. & Haff, G. G. (2009). Periodization: Theory and methodology of training, 5th ed. Champagne, IL: Human Kinetics.*

Bompa, T. & Buzzicchelli, C. (2015). Periodization Training for Sports, 3rd ed. Champagne, IL: Human Kinetics.

Bompa, T. & Carrerra, M. (2015). Conditioning Young Athletes. Champagne, IL: Human Kinetics.

Boyle, M. (2010). Advances in Functional Training. Aptos, CA: On Target Publications.

Cook, G. (2003). Athletic Body in Balance. Champagne, IL: Human Kinetics.*

Cook, G., Burton, L., Kiesel, K., Rose, G. & Byrant, M. F. (2011). Movement Functional Movement Systems: Screening, assessment, corrective strategies. Aptos, CA: On Target Publications.

Dietz, C. & Peterson, B. (2012). Triphasic Training: A systematic approach to elite speed and explosive strength performance (Volume 1). Hudson, WI: Bye Dietz Sport Enterprises.

Haff, G. G & Triplett, N. T. (Eds.) (2016). Essentials of Strength Training and Conditioning (4th ed.). Champaign, IL: Human Kinetics.

Hébert, G. & Til, P. (2014). The Natural Method: Georges Hébert's practical guide to physical education (Volume 1). North Charleston, SC: CreateSpace Independent Publishing Platform.

National Academy of Sports Medicine (NASM) (2013). NASM Essentials of Corrective Exercise Training, revised 1st ed. Burlington, MA: Jones and Bartlett Learning.

Noakes, T. (2003). Lore of Running, 4th ed. Champagne, IL: Human Kinetics.

Santana, C. (2015). Functional Training. Champagne, IL: Human Kinetics.

Smith-Ryan, A. E. & Antonia, J. (2013). Sports Nutrition & Performance Enhancing Supplements. Ronkonkoma, NY: Linus Learning.

Starret, K. & Cordoza, G. (2015). Becoming a Supple Leopared, 2nd ed. Las Vegas, NV: Victory Belt Publishing Inc.

*Resource of historical significance.


## Recommended Syllabus Statement:

Arkansas Tech University does not discriminate on the basis of color, sex, sexual orientation, gender identity, race, age, national origin, religion, veteran status, genetic information, or disability in any of our practices, policies, or procedures. If you have experienced any form of discrimination or harassment, including sexual misconduct (e.g. sexual assault, sexual harassment, stalking, domestic or dating violence), we encourage you to report this to the institution. If you report such an incident of misconduct to a faculty or staff member, they are required by law to notify Arkansas Tech University's Title IX Coordinator and share the basic fact of your experience. The Title IX Coordinator will then be available to assist you in understanding all of your options and in connecting you with all possible resources on and off campus. For more information please visit: http://www.atu.edu/titleix/index.php.

Arkansas Tech University adheres to the requirements of the Americans with Disabilities Act in order to prevent barriers to academic accessibility. If you need an accommodation due to a disability, please contact the ATU Office of Disability Services, located in Doc Bryan Student Center, Suite 171, or visit http://www.atu.edu/disabilities/index.php.

# SCS 6103: Professional Project: Professional Project in Research, Creative Project, or Practicum
# Spring 2021


Instructor: Gina Kraft, PhD, ATC, CSCS
Office: Hull 108
Phone: 479-968-0431
Email: gkraft@atu.edu


## Office Hours:
via WebEx at https://atu.webex.com/meet/gkraft
Monday-Thursday from 10:30a.m. - noon or by appointment

Class Time: By appointment
Class Location: Online as needed

## Required Textbook:
None
**via WebEx at https://atu.webex.com/meet/gkraft**
**Monday-Thursday from 10:30a.m. - noon or by appointment**

## Prerequisites:
As the culminating experience of the MS/SCS program, the Professional Project course requires the prior completion of 27 hours toward the degree. The professional project should be developed and must be approved by the SCS Graduate Program Director prior to enrolling in this course.

## Catalog Description:
The Professional Project is the capstone course for the Master of Strength and Conditioning Studies Degree, serving as the integrative culmination of the program. The student is responsible for producing a substantial piece of independent research, a significant creative project, or a meaningful internship.

## Competencies:
At the end of this course, the student will complete a professional creative project, original research, or a practicum that demonstrates and advanced integration of knowledge, skills, and capabilities within the strength and conditioning realm.

### Independent Research
Independent research can take many forms. The student may complete action research, a formal thesis, or a comprehensive review of a research topic culminating in a written manuscript. If a student wishes to complete independent research, he or she must choose a graduate faculty member who agrees to serve as the primary advisor.

### Creative Project
The creative project may come in many forms. Examples of a creative project include writing a text on a strength and conditioning topic, creating a multimedia presentation package on a strength and conditioning topic, or developing a high school/collegiate strength and conditioning program/curriculum. In every case, the creative project MUST be linked

to a review of literature that justifies the content of the project. In every case, the creative project must manifest critical mass. That is, it must be significant at the graduate level. If a student wishes to complete a creative project, he or she must choose a graduate faculty member who agrees to serve as the primary advisor.

### Practicum

A practicum is a professional field experience completed with an outside organization in which the focus is experiential learning in the area of strength and conditioning. The student is responsible for finding a meaningful practicum experience. He or she must contact the SCS Graduate Program Director who will approve or deny the site.

## Grading:

### Independent Research Option:

The written review of the results of the research must reflect an advanced investigation into an unanswered strength and conditioning question or problem. Manuscripts will be assessed based upon the content, organization, and presentation of the investigation.

Manuscripts will be graded on a 450 point scale:

| | |
|---|---|
| Preliminary drafts/components | 100 points |
| Final paper | 100 points |
| Final presentation | 100 points |
| Peer review | 100 points |
| Program Assessment Questions* | 25 points |
| Program Assessment** | 25 points |
| | |
| Total | 450 points |

### Creative Project Option:

Creative projects must be innovative, visionary, and/or unique in their approach to some strength and conditioning question or problem. Projects will be assessed based upon the content, organization, and presentation of the creation. Each project MUST be accompanied by an extensive supportive review of literature.

Creative Projects will be graded on a 450 point scale:

| | |
|---|---|
| Preliminary drafts/components | 100 points |
| Final paper | 100 points |
| Final presentation | 100 points |
| Peer review | 100 points |
| Program Assessment Questions* | 25 points |
| Program Assessment** | 25 points |
| | |
| Total | 450 points |

### Practicum Option:

This is an experiential learning and/or leadership situation in which the student has the opportunity to demonstrate his or her knowledge, skills, and capabilities in a strength and conditioning setting. Reflection papers will be required weekly. Supervisor feedback and assessment will be obtained. The portfolio will consist of documentation of practicum hours, client profile/program, and classes taught. The portfolio may be submitted electronically or as a hard copy.

Practicums will be graded on a 450 point scale:

| | |
|---|---|
| Weekly reflection papers | 50 points |
| Portfolio | 50 points |
| Supervisor feedback | 250 points |
| Final presentation | 50 points |

| | |
|---|---|
| Program Assessment Questions* | 25 points |
| Program Assessment** | 25 points |
| | |
| Total | 450 points |

Grading Scale:

Earned points of 350 – 450 = passing
Earned points below 350 = not passing

*Program Assessment Questions: All students enrolled in this final capstone Professional Project course will compose 25 multiple choice questions (5 questions per course) covering the major course objectives for SCS 6013, SCS 6023, SCS 6033, SCS 6043, and SCS 6053.
**Program Assessment: All students enrolled in this final capstone Professional Project course will complete a comprehensive objective examination consisting of 35 questions. This assessment is designed to help faculty identify strengths and weaknesses in the MS/SCS program.

## Weekly Summaries:

Each week students will submit a minimum of 1 page double spaced account of their activities for the previous week. The best way to write these summaries is to keep a daily log. The daily logs can be combined to provide the weekly summary. These are due no later than midnight on Sunday.

## Final Presentations:

All students will have 30 minutes to present the findings/results of their professional project. This presentation should review the information provided in the proposal presentation to remind the committee of the student's selected project. The presentation should cover the things learned/accomplished during the project. The student is asked to share their plans for the future as well. After the presentation, allow 15 minutes for questions.

Presentations will be scheduled as listed below. The student may request a presentation time. If a student does not request a time, the remaining slots will be assigned.

April 27
3:00pm – 3:45pm
3:50pm – 4:35pm
4:40pm – 5:25pm
5:30pm – 6:15pm

May 5
3:30pm – 4:15pm
4:20pm – 5:05pm

## Attendance Policy and Academic Dishonesty:

Attendance is expected. Students must be actively engaged in the completion of their professional project. Students are expected to exhibit appropriate conduct as outlined in the University policy regarding academic dishonesty/misconduct. Graduate students are expected to maintain the highest standards of academic integrity (e.g., to refrain from plagiarism and research misconduct). The University's student rights policy will be followed.

## Disabilities:

If you have any documented disability-related concerns that may have an impact upon your performance in this course, please meet with me within the first two weeks of the semester so that we can work out the appropriate accommodations. Accommodations are provided on an individualized basis upon the evaluation of the needs, circumstances, and documentation by the appropriate office on campus.

Tentative Spring 2019 Schedule of Due Dates and Topics

*Note: Each proposal MUST be approved by the Program Director prior to implementation.

| Week | Topics if in Class | Assignments/Learning Activities | | | |
|---|---|---|---|---|---|
| | | Research | | Project | Internship |
| January 11 | Introduction / IRB | Info. Lit. | | Info. Lit. | Info. Lit. |
| January 18 | Publication | IRB due/ Informed Consent | | Info. Lit. | Reflection |
| January 25 | Research Activity / Intro Bibliography | Preliminary Annotated Bibliography due | | Preliminary Annotated Bibliography due | Reflection |
| February 1 | Instrumentation Review/ Individual help | Draft of Review of Lit. | Collect Data | Outline of Project | Reflection |
| February 8 | Instrumentation Review/ Individual help | Draft of Methods | Collect Data | First Draft of Section 1 | Reflection |
| February 15 | Data Analysis / Individual help | Revised Review of Lit. | Collect Data | First Draft of Section 2 | Reflection |
| February 22 | Data Analysis / Individual help | Revised Methods | Collect Data | First Draft of Section 3 | Reflection |
| March 1 | Results / Individual help | SCS Program Questions | Collect Data | SCS Program Questions | Reflection SCS Program Questions |
| March 8 | Results / Individual help | Complete Research | Collect Data | Revision of Section 1 | Reflection |
| March 15 | Individual help | Draft of Results | Revision of Section 2 | Reflection | |
| March 22 | **SPRING BREAK** | | | | |
| March 29 | Individual help | Draft of Discussion | | Revision of Section 3 | Reflection |
| April 5 | Individual help | Revised Results and Discussion | | Draft of Entire Project | Reflection |
| April 12 | Discuss presentation format, time, dress | Final Draft of Paper | | Final Draft of Paper | Reflection |
| April 19 | Final Presentations | SCS Program Assessment | | SCS Program Assessment | SCS Program Assessment |
| April 26 | Final Presentations | Presentations | | Presentations | Presentations |
| May 5 | Final Exam TBD | Presentations | | Presentations | Presentations |

**Appendix B – Faculty Curriculum Vitae**

Dr. Gina Kraft

Dr. Mike Waller

Dr. Rockie Pederson

Dr. John O'Connor

# Gina Kraft
# Assistant Professor of Department of Health and Physical Education
# School of Education

**Education and Certification**

| | | |
|---|---|---|
| Ph.D. | 2009 | Oklahoma State University, Stillwater |
| ATC | 2003 | Certified Athletic Trainer |
| MS | 2001 | University of Oklahoma, Norman |
| BS | 1998 | Oklahoma Baptist University, Shawnee, Oklahoma |
| Diploma | 1994 | Duncan High School, Oklahoma |

**Date of Employment**

August, 2015

**Teaching and/or Administrative Experience**

2020-present: Associate Professor and Program Director for Master's degree in Strength and Conditioning Studies, teaching a variety of graduate courses in strength and conditioning; Department of Health and Physical Education, Arkansas Tech University

2017-2020: Assistant Professor and Program Director for Master's degree in Strength and Conditioning Studies, teaching a variety of graduate courses in strength and conditioning; Department of Health and Physical Education, Arkansas Tech University

2015-2016: Assistant Professor, teaching graduate nutrition, measurement and evaluation, readings in strength and conditioning, and scientific foundations and undergraduate kinesiology and laboratory experiences**;** Sponsor for the Master of Science in Strength and Conditioning Studies; Department of Health and Physical Education, Arkansas Tech University

2005-2015: Assistant Professor, teaching undergraduate wellness lifestyle, cardio boot camp, individual activities/team sports (team taught), care and prevention of athletic injuries, basic nutrition, teaching/designing individual fitness activities, advanced injury recognition/evaluation/management, nutrition for fitness and sport, program design for fitness and sport activities, NSCA strength certificate, exercise physiology, exercise physiology II**;** Department of Kinesiology and Leisure Studies, Oklahoma Baptist University

2001-2005: Instructor, teaching undergraduate wellness lifestyle, cardio boot camp, individual activities/team sports (team taught), ropes course instructor, care and prevention of athletic injuries, basic nutrition, teaching/designing individual fitness activities, advanced injury recognition/evaluation/management, nutrition for fitness and sport, program design for fitness and sport activities, NSCA strength certificate, exercise physiology, exercise physiology II**;** Department of Kinesiology and Leisure Studies, Oklahoma Baptist University

1999-2000: Graduate Teaching Assistant, teaching physical activity courses, first aid/CPR skills lab, exercise physiology lab; Department of Exercise and Sport Science, University of Oklahoma

**Related and/or Consulting Experience**

2020: National Strength and Conditioning Association, Foundations of Coaching Lifts Manual Editor

| | |
|---|---|
| 2019-2020 | National Strength and Conditioning Association, Foundation of Coaching Lifts Advisory Board |
| 2019 | National Strength and Conditioning Association, Lead Instructor for Certified Strength and Conditioning Specialist Exam Prep Live Clinic |
| 2018 | National Strength and Conditioning Association, Lead Instructor for Certified Strength and Conditioning Specialist Exam Prep Live Clinic |
| 2017 | Instructor for Foundations of Coaching Lifts Course through the National Strength and Conditioning Association |
| 2017 | National Strength and Conditioning Association, Secondary Instructor for Certified Strength and Conditioning Specialist Exam Prep Live Clinic |
| 2017 | Complete Instructor Certification for Foundations of Coaching Lifts through the National Strength and Conditioning Association |
| 2015 | Completed the Collaborative Institutional Training Initiative (CITI Program) Coursework Curriculum Groups: Educational Research (nine modules) |
| 2015 | Became licensed as an Athletic Trainer in the state of Arkansas |
| 2014 | Completed Functional Movement Systems, Level I certification, online |
| 2014 | Completed Fitness Nutrition Specialist certification through the National Academy of Sports Medicine, online |
| 2012 | Completed the Corrective Exercise Specialist certification through the National Academy of Sports Medicine, online |
| 2006 | Became licensed to practice as an Athletic Trainer in the state of Oklahoma |
| 2003 | Completed Athletic Training certification |

**Courses Taught (2015-current)**

| | | |
|---|---|---|
| Spring 2021 | PE 6033 – Exercise Physiology | (1 section) |
| | PE 6063 – Current Issues in Coaching and Athletics | (1 section) |
| | SCS 6013 – Professional Project | (1 section) |
| Fall 2020 | PE 6083 – Research Design and Statistics | (1 section) |
| | SCS 6063 – Trends in Sports Nutrition and Metabolism | (1 section) |
| | SCS 6013 – Professional Project | (1 section) |
| Summer 2020 | PE 4033 – Exercise Physiology | (2 sections) |
| Spring 2020 | PE 6033 – Exercise Physiology | (1 section) |
| | SCS 6013 – Measurement and Evaluation in Strength and Conditioning | (1 section) |
| | SCS 6103 – Professional Project | (1 section) |
| Fall 2019 | PE 4033 – Exercise Physiology | (1 section) |
| | PE 3861 – Rhythmic Aerobics (last third of the semester) | (1 section) |
| | PE 6083 – Research Design and Statistics | (1 section) |
| | SCS 6063 Trends in Sports Nutrition | (1 section) |
| Summer 2019 | PE 4033 – Exercise Physiology | (1 section) |
| Spring 2019 | PE 6033 – Exercise Physiology | (1 section) |
| | SCS 6013 – Measurement and Evaluation in Strength and Conditioning | (1 section) |
| | SCS 6103 – Professional Project | (1 section) |
| Fall 2018 | PE 6083 – Research Design and Statistics | (1 section) |
| | SCS 6063 – Trends in Sports Nutrition and Metabolism | (1 section) |
| | SCS 6093 – Exercise Science Seminar | (1 section) |
| | PE 6996 – Thesis Research | (1 student) |
| Spring 2018 | SCS 6103 – Measurement and Evaluation in Strength and Conditioning | (1 section) |
| | SCS 6103 – Professional Project | (1 section) |
| Fall 2017 | PE 6063 – Current Issues in Coaching and Athletics | (1 section) |
| | SCS 6103 – Professional Project | (1 section) |

| | | |
|---|---|---|
| | WS 1002 – Physical Wellness/Fitness | (1 section) |
| Summer 2017 | SCS 6103 - Professional Project | (1 section) |
| Spring 2017 | SCS 6013 – Measurement and Evaluation in Strength and Conditioning | (1 section) |
| | SCS 6063 - Trends in Sports Nutrition and Metabolism | (1 section) |
| | SCS 6093 - Readings in Strength and Conditioning | (1 section) |
| | SCS 6103 - Professional Project | (1 section) |
| Fall 2016 | PE 3661 - Laboratory Experiences in Anatomy, Physiology and Kinesiology | (2 sections) |
| | PE 3663 - Kinesiology | (1 section) |
| | SCS 6023 - Scientific Foundations of Strength and Conditioning | (1 section) |
| | SCS 6093 - Readings in Strength and Conditioning | (1 section) |
| Summer 2016 | PE 3661 - Laboratory Experiences in Anatomy, Physiology and Kinesiology | (1 section) |
| | SCS 6103 - Professional Project as Independent Study | |
| Spring 2016 | PE 3661 - Laboratory Experiences in Anatomy, Physiology and Kinesiology | (2 sections) |
| | PE 3663 - Kinesiology | (1 section) |
| | SCS 6033 - Strength and Conditioning Program Design/Development | (1 section) |
| | SCS 6093 - Readings in Strength and Conditioning as Independent Study | |
| | SCS 6103 - Professional Project | (1 section) |
| | WS 1002 - Physical Wellness/Fitness | (1 section) |
| Fall 2015 | SCS 6013 - Measurement and Evaluation in Strength and Conditioning | (1 section) |
| | SCS 6023 - Scientific Foundations of Strength and Conditioning | (1 section) |
| | SCS 6063 - Trends in Sports Nutrition and Metabolism | (1 section) |
| | PE 3661 - Laboratory Experiences in Anatomy, Physiology and Kinesiology | (2 sections) |
| | PE 3663 - Kinesiology | (1 section) |

## Scholarly and Professional Activities

In Progress Project

Jackson, S., Kraft, G., Dow, M., Khoo, M., Pederson, R., and Cude, K. (2021). Enhancing the Fitness and Academics of Children using Technology in the Schools (FACTS). Manuscript in progress.

Crocker, R., Dow, M, and Kraft, G. (2019). Effects of Various Training Techniques on Bat Velocity of High School Baseball Players. Manuscript in progress.

Kraft, G., Warwick, D., and Roosevelt, R. (2019). Impact of Exercise and Heart Rate Variability on Attentional Control. Pilot Data collected Spring 2019. Analysis ongoing.

Refereed Publications

Crocker, R., Kraft, G., and Dow. M. (2020). Effects of Various Training Techniques on Bat Velocity of High School Baseball Players. *International Journal of Sports Physiology and Performance.* Submitted April and rejected

Crocker, R., Kraft, G., and Dow. M. (2020). Effects of Various Training Techniques on Bat Velocity of High School Baseball Players. *International Sport Coaching Journal.* Submitted February and rejected.

Kraft, G. and Marks, P. (2020). Comparison of Fitness Levels between Health and Physical Education Majors and Recreation and Park Administration Studies Majors (abstract). *Research Quarterly for Exercise and Sport, 91*, A106-A107.

Jackson, S., Dow, M, Pederson, R., Macke, H, Kraft, G., and Osendine, J. (2020). Mass Versus Distributed Feedback on Children's Activity Levels (abstract). *Research Quarterly for Exercise and Sport. 91,* A46.

Jackson, S., Pederson, Kraft, G., Dow, M., and Macke, H. (2020). The Effect of Activity Trackers on Meeting Arkansas State Standards. Research Quarterly for Exercise and Sport (abstract). *Research Quarterly for Exercise and Sport. 91*, A143.

Jackson, S., Kraft, G., Pederson, R., Dow, M., Macke, H., and Oxendine, J. (2020). Effects of Activity Tracker Feedback on Elementary Student's Activity Levels (abstract). *Research Quarterly for Exercise and Sport. 91*, A34-A35.

Kraft, G. and Dow, M. (2019). Validation of the Garmin Forerunner 920XT VO2max Estimation and the Polar RS300X Fitness Test. *International Journal for Innovation Education and Research.* 7(9), 22-29.

Kraft, G. and Dow, M. (2018). Validation of the Garmin Forerunner 920XT VO2max Estimation and the Polar RS300X Fitness Test. *Journal of Strength and Conditioning Research.* Submitted November and rejected.

Kraft, G. and Dow, M. (2018). Validation of the Polar Fitness Test. *International Journal for Innovation Education and Research, 6*(1), 27-34.

Kraft, G. and Roberts, R. (2017). Validation of the Garmin Forerunner 920XT Fitness Watch $VO_{2peak}$ Test. *International Journal for Innovation Education and Research, 5*(2), 61-67.

Non-refereed Publications

Kraft, G. (2016). Suffer in Winter, Ride Hard in Spring. Oklahoma Sports and Fitness, http://www.oksportsandfitness-digital.com/publication/?i=285096

Kraft, G. (2015). Cycling 100: Pursuit of the Century. Oklahoma Sports and Fitness, http://www.oksportsandfitness-digital.com/publication/?i=247060

Kraft, G. (2014). Cross Training Strategies. Oklahoma Sports and Fitness, http://www.oksportsandfitness-digital.com/publication/?i=222094

Kraft, G. (2014). Spinning Around: Interval Training Techniques. Oklahoma Sports and Fitness. http://www.oksportsandfitness-digital.com/publication/?i=213773

Grants

Kraft, G. (2019)-$2,8500.00 from *Arkansas Tech Professional Development* to attend and present 2 posters and a roundtable at SHAPE National Convention, Salt Lake City, UT. Cancelled due to COVID-19.

Kraft, G. (2018)-$1,7000.00 from *Arkansas Tech University, Professional Development* to present a poster at the National Strength and Conditioning Association's National Meeting,

Cabell, L., O'Connor, J., Waller, M., Kraft, G., Kelly, P., & Pederson, R. (2018). The Effect of Active Learning Strategies on Perceptions of Technology Use and Perceptions of Learning Environment. Steelcase Education Active Learning Center Grant. Applied for $67,000.00.

Kraft, G. (2018)-$500 from *University Faculty Development Fund of College of Education* to attend and recruit graduate students from the Oklahoma State Clinic for the National Strength and Conditioning Association, Stillwater, OK.

Kraft, G. (2017)-$2,056.00 from *Arkansas Tech University, Professional Development* to attend the National Strength and Conditioning Association's National Meeting, Las Vegas, NV.

Kraft, G. (2016)-$2,082.00 from *Arkansas Tech University, Professional Development* to attend the National Strength and Conditioning Association's National Meeting and attend Pre-Conference Workshops, New Orleans, LA.

Kraft, G. (2016)-$500 from *University Faculty Development Fund of College of Education* to attend the Arkansas State Clinic for the National Strength and Conditioning Association, Jonesboro, AR.

Kraft, G. (2015)-$500 from *University Faculty Development Fund of College of Education* to present "Training for Cycling" at the Arkansas Association for Health, Physical Education, Recreation, and Dance Convention, Eureka Spring, AR.

Presentations

Kraft, G. and Austin, C. (2021). Adobe Acrobat: Tips and Tricks to a Successful Portfolio. ATU Professional Development Day, Russellville, AR.

Kraft, G. (2020). Perspective of a Faculty Member. Promotion and Tenure Workshop, ATU Academic Affairs, Russellville, AR.

Kraft, G. and Marks, P. (2020). Comparison of fitness levels between Health and

Physical Education majors and Park Administration Studies majors. National Convention Poster Presentation, SHAPE America, Salt Lake City, UT. Accepted. Cancelled due to COVID-19.

Jackson, S., Dow, M, Pederson, R., Macke, H, Kraft, G., and Osendine, J. (2020). Mass Versus Distributed Feedback on Children's Activity Levels. National Convention Poster Presentation, SHAPE America, Salt Lake City, UT. Accepted. Cancelled due to COVID-19.

Jackson, S., Pederson, Kraft, G., Dow, M., and Macke, H. (2020). The Effect of Activity Trackers on Meeting Arkansas State Standards. National Convention Poster Presentation, SHAPE America, Salt Lake City, UT. Accepted. Cancelled due to COVID-19.

Jackson, S., Kraft, G., Pederson, R., Dow, M., Macke, H., and Oxendine, J. (2020). Effects of Activity Tracker Feedback on Elementary Student's Activity Levels. National Convention Roundtable Presentation, SHAPE America, Salt Lake City, UT. Accepted. Cancelled due to COVID-19.

Van Houtte, P., Aulgur, J., Kraft, G., West, S., Thibodeaux, J., and Rank, B. (2019). Not the Best College Teachers…Yet. Tech Talks. ATU Professional Development Day, Russellville, AR.

Waller, M., Godfrey, J., Macke, H., Young, R., Kraft, G., Mann, J., and Shim, A. (2018). The relationship between the countermovement power push-up and bench press and throw barbell velocity. National Conference Poster Presentation, National Strength and Conditioning Association, Indianapolis, IA.

Kraft, G. and Dow, M. (2018). Validation of fitness test on 2 commercial fitness watches, National Conference Poster Presentation, National Strength and Conditioning Association, Indianapolis, IA.

Waller, M., Godfrey, J., Kraft, G., Macke, H., Young, R., Shim, A., and Mann, B. (2018). The relationship between the countermovement power push-up and bench press and throw barbell velocity. National Conference, National Strength and Conditioning Association, Indianapolis, IA.

Kraft, G. (2018). Using Your Outlook Calendar to Schedule Advising Appointments, HPE Faculty, Russellville, AR.

Kraft, G. (2017). The Vegetarian Athlete, Presented at the Arkansas State Clinic, National Strength and Conditioning Association, Little Rock AR.

O'Connor, J., Pederson, R., and Kraft, G. (2016). BMI Differences in Elementary School Children in North Central Louisiana. Presented at the Arkansas AHPERD Convention, Little Rock, AR.

Kraft, G. (2015). Training for Cycling. Presented at the Arkansas AHPERD Convention in Eureka Springs, AR.

Kraft, G. (2015). Training for Cycling. Presented at the Oklahoma State Clinic for the National Strength and Conditioning Association in Oklahoma City, OK.

Kraft, G. (2015). The Vegetarian Athlete. Presented at the Oklahoma State Clinic for the National Strength and Conditioning Association in Tulsa, OK.

Meetings

| | |
|---|---|
| 2019 | Arkansas State Clinic for the NSCA in Conway, AR |
| 2018 | Oklahoma State Clinic for the NSCA in Tulsa, OK |
| 2018 | Arkansas State Clinic for the NSCA in Fayetteville, AR |
| 2017 | Midwest Regional Conference for the NSCA in Corpus Christi, TX |
| 2017 | Oklahoma State Clinic for the NSCA in Stillwater, OK |
| 2017 | Arkansas State Clinic for the NSCA in Little Rock, AR |
| 2017 | National Strength and Conditioning Association Annual Conference, Las Vegas, NV |
| 2016 | Oklahoma State Clinic for the NSCA in Oklahoma City, OK |
| 2016 | Arkansas State Clinic for the NSCA in Jonesboro, AR |
| 2016 | Missouri State Clinic for the NSCA in Springfield, MO |
| 2016 | National Strength and Conditioning Association Annual Conference, New Orleans, LA |

2015 Arkansas AHPERD Convention in Eureka Springs, AR
2015 Oklahoma State Clinic for the NSCA in Oklahoma City, OK

Other

**Honors /Awards**

2019 Facilitator for Cohort 4 of Leadership Tech
2016 Inaugural Class of Leadership Tech

Book Review

Applications in Performance & Clinical Sports Nutrition: A Case Approach. Jones & Bartlett Learning, Burlington, MA. Textbook in development.

Memberships to Professional Organizations

Functional Movement Systems
National Athletic Trainers Association
National Strength and Conditioning Association

## Service

University

PRHA Departmental Promotion and Tenure Committee, August 2020 - present
Student Learning Assessment Committee, August 2019 - present
Graduate Dean Search Committee, 2019
Graduate Council, Vice-Chair, 2018- May 2019
Graduate Dean Search Committee, 2018
College of Education Dean Search Committee, 2018
Graduate Council, 2016-present
Academic Appeals Committee, 2016

School/Department

HPE Departmental Promotion and Tenure Committee Chair, January 2020 - present
College of Education Women's History Committee, 2020
HPE Search Committee, 2019-2020
Thesis Chair:
Joseph, A. "The Effects of Plyometric vs Habitual Land Training On The 50m Freestyle Swim Performance Following A Six-Week Training Intervention In Youth Swimmers," 2019.
HPE Graduate Curriculum Development Committee Chair, 2018
Thesis Committee Member:
Macke, H. "The Relationship Between Force-Time Variables of the Loaded Squat Jump and Midthigh Block Clean Pull." 2018
HPE Graduate Curriculum Development Committee, 2017
Recruiter for Strength and Conditioning Studies Program, 2017-present
HPE Search Committee Chair, 2016-2017
HPE Department Head Search Committee, 2016-2017

College of Education Homecoming Open House, 2016, 2017
College of Education Technology Committee, 2016, 2017
NSCA Sponsor for the Masters' Degree in Strength and Conditioning Studies, 2015-2016
HPE Search Committee, 2015-2016
College of Education Apple iPad Initiative Committee, 2015
Served as committee member on the following graduate action research studies:
Dare, J. "Correlation between Stride Frequencies of Treadmill and Overground Running," 2016.
Scott, M. "Effects of Attentional and Motivational Priming on Athletic Performance," 2016.
Served as committee member on undergraduate honors research project:
Fletcher, K. "Determining the Percentage Increase in Initial 1 Rep Max Prior to Hypertrophy of Muscles When Engaging in Strength Style Weight Lifting," 2016.
Independent Study Courses taught:
PE 6893: Independent Study: Garmin Validation Research, Spring 2020
SCS 6013: Professional Project, Fall 2019
SCS 6013: Scientific Foundations, Fall 2017
SCS 6103: Professional Project, Summer 2016
SCS 6093: Readings in Strength and Conditioning, Spring 2016

ATU Community

Faculty Mentor, Cross Country, 2020-present
Judge, Virtual Graduate Student Research Symposium, 2020
Panelist, Degree Completion Event, Graduate Student Council, 2020
Nutrition presentation for Cross Country team, Fall 2020
Nutrition presentation for Softball team, Fall 2016

Profession

Abstract Reviewer, American College of Sports Medicine, Central States ACSM, September 2019
Abstract Reviewer, American College of Sports Medicine, Central States ACSM, September 2018
Board of Directors, Arkansas State NSCA, Fall 2017-present
Abstract Reviewer, American College of Sports Medicine, Central States ACSM, August 2017
Health and Wellness Virtual Focus Group, McGraw Hill Company, Online, Spring 2017

Community Service

Runnersville, Weekly Two-Minute Tips, 2020
Runnersville (formerly Women Can Run) Volunteer Coach Junior Program, 2020
Women Can Run, Weekly Two-Minute Tips, 2019
Women Can Run Volunteer Coach Junior Program, 2019
Women Can Run Guest Speaker, 2018
Women Can Run, Weekly Two-Minute Tips, 2018
Women Can Run Volunteer Coach Junior Program, 2018
Women Can Run Volunteer Coach Junior Program, 2017
River Valley Chapter of Ozark Off Road Cyclists trail maintenance, 2016, 2017
Women Can Run Volunteer Coach Junior Program, 2016
Cabin Creek Public Use Area Cache In Trash Out, 2016

**Curriculum Vitae**
**Michael Waller**

[redacted]

**Education:**
Doctorate of Philosophy in Exercise and Sport Science from The University of Utah, Salt Lake City, Utah. (2011)

Master's of Arts in Exercise Science from Concordia University in River Forest, IL. (2003)

Bachelor's of Science in Physical Education with emphasis in Fitness from Western Illinois University, Macomb, IL. (1994)

**Certifications:**
Fellow of National Strength and Conditioning Association (Awarded April 4, 2018)

National Strength and Conditioning Association – Certified Strength and Conditioning Specialist with Distinction (CSCS*D) #954494

National Strength and Conditioning Association – Certified Personal Trainer with Distinction (MSCA-CPT*D) #11341094

USA Weightlifting – Level 1 Coach (1993 – 2014; 2019)

USA Weightlifting – Level 2 Coach (2019)

Certified Ergonomics Assessment Specialist II from Back School of Atlanta

**Memberships:**
National Strength and Conditioning Association (1993 - Present)

USA Weightlifting (1992 – 2014, 2019)

**Professional Experience:**
*Department of Health and Physical Education, Arkansas Tech University, (August 2017 to Present)*
*Russellville, AR*
Associate Professor for undergraduate and graduate strength & conditioning courses, utilizing lecture and lab formats.

*Written Certification Committee, Collegiate Strength and Conditioning Coaches Association (CSCCa) (May 2012 to Present)*
Written certification Subject Matter Expert (SME) assist in the development of the CSCCa written exam portion of the Strength and Conditioning Coach Certified (SCCC) for independent accreditation.

*Department of Kinesiology and Human Performance, Briar Cliff University, (June 2016 to May 2017)*
*Sioux City, IA*
Associate Professor for exercise physiology, biomechanics, strength & conditioning, and research methods courses, utilizing lecture and lab formats for graduate and undergraduate students. Oversee graduate and undergraduate internships, and graduate thesis.

*Department of Exercise Science and Health, University of Saint Francis, (August 2013 to May 2016)*
*Fort Wayne, IN*
Assistant Professor for kinesiology, biomechanics, strength & conditioning, and exercise coaching courses, utilizing lecture and lab formats for undergraduate students. Additional duties involve managing the fitness center used by students, staff, faculty, and athletics, and volunteering time as a coach for students interested in competing in powerlifting and weightlifting while assisting athletes requesting assistance with their individual sports (American football).

*Lead instructor for National Strength and Conditioning Association's CSCS and NSCA-CPT Exam Preparation Clinic (Fall 2013 to June 2016)*
Prepare individuals to take the certified strength and conditioning specialist and certified personal trainer exams offered by the NSCA. These clinics utilize power points™ developed by the NSCA which allows the instructor to focus the attendees study to areas they may need additional time studying while also addressing coaching points.

*Department of Human Performance and Physical Education, Adams State University, (August 2011 to May 2013)*
*Alamosa CO*
Assistant Professor for exercise physiology and biomechanics courses instructing lecture, and lab courses for undergraduate and graduate students. Weightlifting coach of collegiate weightlifters and strength coach (personally requested for these services by these athletes) for female soccer players.

*Department of Exercise and Sport Science, University of Utah (2008 to 2011)*
*Salt Lake City, UT*
Doctoral student in exercise physiology and Teaching Assistant for lecture, activity and lab courses for undergraduate students. Weightlifting coach of collegiate weightlifters and strength coach (personally requested for these services by these athletes) for athletes in throwing events of hammer and discus, Brazilian Jiu-jitsu, high school swimmers, and bobsled. (See below list of classes instructed)

*Velocity Sports Performance (2009 to 2010)*
*Lehi, UT*
Employed as a Strength and Conditioning Coach to develop and implement strength-conditioning programs for high school and collegiate athletes. Coaching duties involve

training session development and instruction of weightlifting movements, plyometric drills, strength exercises, speed & agility drills and rehabilitative exercises.

*WCS – Occupational Rehabilitation and Sports Medicine / WCS – Gattone Sports Performance (2005 to 2008)*
*Hillside, IL, Naperville, IL and Barrington, IL*
Employed as a Strength and Conditioning Specialist/Coach to develop and implement strength-conditioning programs for work hardening patients, high school and collegiate athletes. Program development was periodized based that incorporated weightlifting movements, plyometric drills, strength exercises, speed & agility drills and rehabilitative exercises.

*Highland Park Hospital Health and Fitness (1999 – 2005)*
*Buffalo Grove, IL*
Fitness Director/Personal Trainer with duties that included managing and educating Fitness Department staff, conducted occasional group exercise classes, budget development/management, fitness programming and marketing development, client strength-conditioning program development/implementation, exercise equipment maintenance/repair and assisted in overall facility upkeep. Additional duties involved guest lecturing at company clients on health and fitness related topics.

*East Bank Club (1995 – 1999)*
*Chicago, IL*
Personal Trainer/ (Fitness Department Coordinator) with duties including client strength-conditioning program development/implementation, managing of Fitness Department staff, and program development.

*YMCA of McDonough County (1993 – 1995)*
*Macomb, IL*
Fitness Consultant with duties that included membership strength-conditioning program development, group exercise class instruction, fitness education and exercise equipment maintenance/repair.

**Professional Service:**

1. Reviewer for Sports in 2017 for manuscript (Manuscript IDs: sports-169048, 220796, 258086)
2. Reviewer for Sports in 2016 for manuscript (Manuscript ID: sports-159025)
3. Reviewer for Journal of Sports Rehabilitation in 2016 for two manuscripts (JSR.2016-0108 and JSR.2016-0082)
4. Reviewer for Strength and Conditioning Journal in 2016 for manuscript (SCJ-D-16-00077)

**Additional related experience:**

1. Competitive powerlifter (1991 to 2007) participating in the squat, bench press and deadlift events. (ADFPF, USAPL)

2. State referee for USA Powerlifting (USAPL) (formerly ADFPA)
3. Coached powerlifters at state and national level, with some holding National records.
4. Competitive weightlifter (1994 – 2004) participating in the snatch and clean & jerk events.
5. Coached weightlifters at state level to collegiate national meets.
6. Competed in state level strongman competitions and Highland games.

**Courses taught:**

1. **PHES 134 Introduction to Exercise Science** – An overview of the most current science-based recommendations on individualizing fitness programs to develop cardiovascular/respiratory health, muscular strength and flexibility, and optimal body composition through physical activity and health behaviors. The course includes some activity components so that students can apply the information to their potential career.
2. **PHES 127-01 Weight Training** – This course focuses on instructional teaching strategies and methods to apply the fundamental skills of weight training. Instructional teaching strategies include safety, techniques of lifting, strength and tone development, and legal and safety issues. The course will provide models for development of a weight training program.
3. **PHES 245 Personal Training** – A focus on the complex process of designing safe, effective, and goal-specific resistance, aerobic, plyometric, and speed training programs for individuals. Featuring a step-by-step approach to designing exercise programs with special attention to the application of principles based on age, fitness level, and health status. Using comprehensive guidelines and sample clients, students can learn appropriate ways to adjust exercise programs to work with a variety of clients while accommodating each client's individual needs. This will also prepare the student for National certification in personal training.
4. **KHP 276 Stress Management** – This course covers the stress process and its relation to health and disease, lifestyle, and the sociocultural environment. It includes an analysis of physiological, psychological, sociological, and environmental parameters of stress, emphasizing development of personalized stress management strategies to enhance academic, personal, and social development.
5. **PHES 323 Coaching & Teaching Athletic Conditioning -** This course is an exploration of various methods of coaching and teaching weight training and aerobic conditioning exercises. Basic techniques and rules will be reviewed. Students will develop individualized coaching plans to meet the needs of diverse participants in athletic programs.
6. **PHES 356 Health and Safety** – A study of the relationship of personal health and safety behaviors, self-care, and individual decisions to wellness, disease and injury prevention, and their influence on dimensions of health. Areas of

concentration include chronic and communicable disease prevention, safety, consumer health, and substance abuse. A variety of teaching methods are modeled in the course

7. **PE 4033 (KHP 360, PHES 360, HPPE 329) Exercise Physiology** – Introduction and overview of the physiological basis of physical education and athletics. The effects of exercise on the various systems will be considered. Practical application of exercise science to physical fitness and athletic performance will be emphasized.
8. **PE 3663 (PHES 410, HPPE 340) Kinesiology** – A focus on the nature of human movement as influenced by neural factors, anatomical factors, muscular system, and mechanical principles that apply to the kinematics and kinetics of movement.
9. **WS 3003 Exercise Prescription** – A course designed to expose the student to the aspects of health-related and skill-related physical fitness, with particular attention given to prescribing exercise programs. Attention will be given to choosing appropriate fitness assessments, along with development of appropriate goals for clientele.
10. **KHP 454 (PHES 452 & HPPE 430) Biomechanics (Undergraduate)** – Instruct the students on the application of the mechanical principles in the study of living organisms. Develop an understanding and application of kinetic and kinematic variables of human movement in static, dynamic and fluid environment.
11. **PHES 460 Special Topics in Exercise Science** – The course is seminar style examining a selected topic, them and/or problem in nutrition or fitness. The course will thoroughly explore the particular topic using current research and best practices.
12. **SCS 6023 Scientific Foundations of Strength and Conditioning** – An intensive advanced course integrating the principles of Exercise Physiology, Biomechanics, and Exercise Psychology as they relate to strength and conditioning programs.
13. **SCS 6033 Strength and Conditioning Program Design and Development** – An advanced course that integrates scientific principles and practical applications related to designing a safe and effective strength and conditioning training program. Tenets from Exercise Physiology, Biomechanics, and Exercise Psychology will be reviewed as design principles are covered.
14. **SCS6043: Techniques for Development of Hypertrophy, Strength, and Power** – An intensive course designed to assist trainers and coaches in developing the ability to teach proper resistance training techniques. Scientific research dealing with the development of hypertrophy, strength, and power will be explored.
15. **SCS 6053 Techniques for Development of Speed, Agility, Reaction Time & Endurance** – An intensive course designed to assist trainers and coaches in teaching various techniques designed to enhance flexibility, speed, agility, reaction time, and glycolytic and aerobic endurance.
16. **SCS 6083 Instructional Strategies for Strength Coaches** – This course focuses on effective sport pedagogy. Students will gain experience in a range of

pedagogical skills including designing learning experiences, task presentation, content analysis, strategies for developing the learning environment, assessment of athlete/client performance, and systematic observation techniques for analyzing and improving teaching.

17. **WS 4013 Practicum** – This program is designed to expose undergraduate majors to training in a community or corporate wellness setting. Students will organize, develop, market, and implement wellness programming for Arkansas Tech University students and employees. The course involved discussion on hiring, managing, facility operations and budgeting concepts as they relate tie the health and fitness profession.
18. **WS 4023 Principles of Strength and Conditioning (KHP 450 and 650; PHES 485) Theories of Strength and Conditioning** – Advanced knowledge in effective development and implementation of resistance training, strength and conditioning planning, coaching concepts for the strength coach, dissemination of information on block periodization, tapering, and undulating periodization principles. Undergraduates developed a 52-week annual plan for a collegiate sport while the graduate students developed an annual plan that required the management of three collegiate sports. All students were required to develop and turn in a binder that was the accumulation of information disseminated over the course of the semester.
19. **WS 4063 Wellness and Fitness Programming** – This course is designed to provide the student with the opportunity to discover various methods employed in planning and implementing wellness and fitness programs in multiple settings. Special emphasis is placed the administration of client-specific health enhancement programs designed for persons in the following settings: corporate, fitness center, and physical rehabilitation.
20. **KHP 401 and 501 (HPPE 503) Introduction to Research (Lecture and on-line)** – An introductory research course for undergraduate and graduate students focusing on the area of physical education and human performance. Participants will develop an understanding of the purpose and importance of research in this specific area, overview basic elements of quantitative, qualitative, mixed methods, and action research methods, enhance skills to evaluate and critique problem statement for a specific research study, and gain an appreciation for conducting research. (Both Lecture and on-line courses)
21. **KHP 500 Graduate Fitness Testing & Prescription (HPPE 422 Exercise Evaluation & Fitness)** – These courses familiarized students with the current methods used to determine levels of fitness in apparently healthy individuals, as well as individuals from special populations. Students learned how to prescribe exercises programs for these individuals based on their fitness evaluation, basic training principles and other considerations. Students were tested various individuals within specific testing parameters and apply course knowledge to practical situations
22. **HPPE 539 Strength and Conditioning (On-line Course)** – This course is designed to provide information relative to the basic foundation of coaching

sports conditioning including muscle physiology, bioenergetics, training methodology, exercise technique, program design, and facility management. Students were evaluated on their ability to develop a general strength-training program for a specific sport and to demonstrate their knowledge relative to proper lifting techniques and training procedures.

23. **PE 6053 (HPPE 540) Biomechanics** – A course that led graduate students through the study of the anatomical and mechanical principles underlying human movement. Practical application of biomechanical principles in human movement and various sport activities that were analyzed using accelerometers, force plates and qualitative video analysis.
24. **HPPE 543 Measurement and Evaluation (Lecture and on-line) –** A course designed as an introduction to basic statistics involved in measurement and evaluation, and provides opportunities for students to analyze current research in the fields of physical education, exercise science, and athletics. Students will come to understand the complete research process, including types of research, statistical and measurement concepts in research, and how to read, write and comprehend a research report. One of the most challenging problems facing physical educators today is how to evaluate physical performance accurately and fairly. The intent of this course is to provide students and physical educators the tools necessary for evaluating performance in physical activity programs and athletics, and to justify the existence of those programs via appropriate analytical techniques. (Both Lecture and on-line courses.)
25. **KHP 498 & 598 Internship** – Faculty Supervisor for Kinesiology and Human Performance undergraduate and graduate students.
26. **KHP 595 Graduate Practicum** – Faculty Supervisor for Kinesiology and Human Performance graduate students.
27. **KHP 765 Special Topics (Applied Sport Biomechanics)** – Graduate students learned in-depth knowledge on the neuromuscular system, post-activation potentiation, impulse-momentum relationship, how to evaluate power, force, velocity, acceleration and deceleration that can be used by practitioners and coaches. Accelerometers, switch mats, ergometers, video analysis and timing devices were used to obtain data that was used for analysis and interpretation.
28. **ESSF 1073 Circuit Training** – Developed and led students through a semester long resistance training circuit. This course is designed to introduce the benefits of circuit training. The course includes a combination of various weight training stations as well as cardiovascular stations designed to improve muscular strength, muscular endurance, and cardiovascular fitness.
29. **ESSF 1062 Flexibility for Spor**t – Instruction on the concepts of dynamic warm-ups, the variations of stretching exercises and application of sport-specific flexibility programs. Introduction to concepts involved with flexibility for fitness. Safe and enjoyable ways to increase flexibility. Short lectures along with workouts. Pre- and post-fitness appraisals will be done for student's own records.

30. **ESSF 1086 Intermediate Weight-training** – Instruction on hang cleans and other technically difficult exercises, along with program design principles and methods. Develops and/or improves upon weight training skills learned at the beginning level. Many of the skills and concepts stressed in Elementary Weight Training will be expanded. Basic anatomy and kinesiology of weight lifting and strategies for strength, size, and/or endurance gains will be covered.
31. **ESS 4387/6387 Resistance Training for Health & Rehabilitation** – Teaching Assistant for this on-line course is designed to reviews acute and chronic resistance exercise (strength training) and prescription of resistance exercise for a variety of populations. The focus of the course will be the influence of resistance training on health, disease, and injury prevention, and the rehabilitation of acute injury and chronic disease and disability. Monitored on-line discussions and graded assignments as instructed by the primary instructor.
32. **ESS 4465 Exercise Programming Laboratory** – Instructed students how to conduct field and clinical lab assessments for cardiovascular, body composition, aerobic endurance, flexibility, power, and strength, in conjunction with teaching the understanding of the physiological aspects of each assessment. Focuses on some of the basic skills required of a Fitness Leader. These skills include performing fitness evaluations, calculating energy costs, writing individualized exercise prescriptions, conducting personal training sessions, and developing/implementing group exercise classes.
33. **ESS 4690 Training and Planning -** Principles and models of training for periodization of training plans for high-performance athletes. Lecture section involves theory, research, and development of periodized programs. Practical section covers coaching techniques for weightlifting movements, strength exercises, plyometrics, speed drills, and other performance training methods.

**Collegiate Strength and Conditioning Coaches association (CSCCa) Involvement:**

1. Written Certification Committee for the Strength and Conditioning Coach Certified exam, May 2012 to Present
2. 2019 CSCCa National Conference. Presentation: Upper-, Lower-, and Total- body Power: A Practical Approach. Kansas City, MO. May 8 – 10, 2019.
3. 2019 CSCCa National Conference. Panel Discussion Moderator: Health & Safety Presentation Preventing Exertional Illnesses and Incidents in Athletes. Kansas City, MO. May 8 – 10, 2019.
4. 2018 CSCCa National Conference. Presentation: Lower-body Deceleration Programming. Fort Worth, TX. May 9 – 11, 2018.
5. 2017 National CSCCa Conference attendee. Orlando, FL, May 10-12, 2017.
6. 2016 National CSCCa Conference attendee. Fort Worth, TX, May 5-7, 2016.
7. 2015 National CSCCa Conference attendee. Nashville, TN, May 6-8, 2015.
8. 2014 National CSCCa Conference attendee. Salt Lake City, UT, May 7-9, 2014.

**National Strength and Conditioning Association Involvement:**

1. NSCA National Conference Attendee (1996 – 2018)
2. NSCA Coaches Conference Attendee. Louisville, KY, January 7-8, 2015.
3. NSCA Coaches Conference Attendee. Indianapolis, IN, January 10-11, 2014.
4. NSCA Endurance Clinic Attendee. Colorado Springs, CO, November 15-17, 2013
5. Utah State Director (2009 to 2011)
6. Weightlifting SIG Vice-Chair (2006 – 2008)
7. Illinois State Director (2003 to 2008)
8. Finance Committee Member (2006 – 2009)
9. Reviewer for *Strength & Conditioning Journal* (2006 – Present): Confirmation may be obtained through contacting the Editor of the *Strength & Conditioning Journal*
10. 2011 NSCA Utah Strength and Conditioning Clinic. Director/Host. Salt Lake City, UT. April 9, 2011.
11. 2010 NSCA Utah Strength and Conditioning Clinic. Director/Host. Salt Lake City, UT. April 3, 2010.
12. NSCA North Central Regional Clinic. Co-Host. Minneapolis, MN. April 19 – 20, 2008.
13. 2008 NSCA Illinois Strength and Conditioning Clinic. Director/Host. Hoffman Estates, IL. February 23, 2008.
14. NSCA Illinois Strength, Power and Programming Clinic. Director/Host. Naperville, IL. October 6, 2007.
15. 2007 NSCA Illinois Strength and Conditioning Clinic. Director/Host. Hoffman Estates. IL. February, IL 2007.
16. 2006 NSCA Illinois Strength and Conditioning Clinic. Director/Host. Elk Grove Village, IL. May 20, 2006.
17. NSCA Illinois Injury Prevention and Conditioning Clinic. Director/Host. Ithaca, IL. October 1, 2005.
18. 2005 NSCA Illinois Sports Conditioning Clinic. Director/Host. Elk Grove Village, IL. February 26, 2005.
19. 2005 NSCA Illinois Strength and Conditioning Clinic. Director/Host. Downers Grove, IL. January 29, 2005.
20. NSCA Illinois Personal Training Clinic. Director/Host. Chicago, IL. October 24, 2004.
21. 2004 NSCA Illinois Strength and Conditioning Clinic. Director/Host. Elgin, IL. January 17, 2004.

**Professional Conferences Attended:**

1. 2019 Coaching and Sport Science College. Center of Excellence for Sport Science and Coach Education at Eastern Tennessee State University, Kingsport, TN. December 6 & 7, 2019.
2. 2018 Coaches College. Center of Excellence for Sport Science and Coach Education at Eastern Tennessee State University, Johnson City, TN. November 30 - December 1, 2018.
3. 2017 Coaches College. Center of Excellence for Sport Science and Coach Education at Eastern Tennessee State University, Johnson City, TN. December 1-2, 2017.
4. 2016 Coaches College. Center of Excellence for Sport Science and Coach Education at Eastern Tennessee State University, Johnson City, TN. December 9-10, 2016.

**National Strength and Conditioning Association Presentations:**

1. 2019 NSCA Nebraska State Fall Clinic. Power Exercises: Applications and Progressions for Developing the Collegiate Athlete. Omaha, NE. November 9, 2019.
2. 2019 NSCA Nebraska State Winter Clinic. The Role of Upper Body Power with Developing Collegiate Athletes Omaha, NE. January 19, 2019.
3. 2017 NSCA North Central Regional Conference. (Co-presenter: Shim, A. and Waller, M.) Improving stability in special populations. St. Paul, MN. April 8, 2017.
4. 2017 NSCA Tactical Strength and Conditioning (TSAC) Annual Training conference. External Loading Effects on Movement and Daily Operations. Orlando, FL. April 3 – 6, 2017.
5. 2017 NSCA South Dakota/North Dakota State Clinic. Testing and Assessing Muscular Strength and Power. Location: Avera Prairie Conference Center and Avera Sports Institute, 1000 E 23rd. St Sioux Falls, SD. December 3, 2016.
6. NSCA CSCS Exam Preparation Lead Instructor. Toledo, OH. March 19 & 20, 2016.
7. 2015 NSCA Great Lakes Regional Clinic. Power Application and Progressions (Hands-on) Muncie, IN. November 14, 2015.
8. 2015 NSCA North Dakota/South Dakota Clinic. Planning for Power Development (Lecture and Hands-on) Sioux Falls, SD. October 17 & 18, 2015.
9. NSCA CSCS Exam Preparation Lead Instructor. Osh Kosh, WI. October 10 & 11, 2015.
10. NSCA CSCS Exam Preparation Instructor. Orlando, FL. July 7 & 8, 2015.
11. NSCA CSCS Exam Preparation Instructor. Eugene, OR. May 23 & 24, 2015.

12. NSCA CSCS Exam Preparation Lead Instructor. Fort Wayne, IN. May 16 & 17, 2015.
13. NSCA CSCS Exam Preparation Lead Instructor. Mundelein, IL. April 25 & 26, 2015.
14. 2015 NSCA North Central Regional Conference. Avoiding blunders in strength and conditioning: Long Term Athletic Development, Part 2. Bloomington, MN. April 11 & 12, 2015.
15. 2014 NSCA Great Lakes Regional Conference. Athletic preparation with weightlifting movements. Ypsilanti, MI. September 12&13, 2014.
16. Instructor for the National Strength and Conditioning Association (NSCA) Certified Personal Trainer (CPT) and Certified Strength and Conditioning Specialist (CSCS) Exam Preparation Clinics. July 8 & 9, 2014, Las Vegas NV.
17. Instructor for the NSCA CPT Exam Preparation Clinic. March 29 & 30, 2014, Dayton OH.
18. 2014 CSCS Exam Preparation Presenter. Indianapolis, IN. January 8, 2014
19. 2013 NSCA Illinois Personal Training Clinic. Assessment: Fitness vs. Performance. Woodbridge, IL. November 2, 2013
20. 2013 CSCS Exam Preparation Presenter. Woodbridge, IL. September 14 & 15, 2013
21. 2010 NSCA Rocky Mountain Regional Clinic. Exercise Planning for the Personal Trainer. Chandler, AZ. November 12 & 13, 2010.
22. 2010 NSCA National Conference. Teaching and Understanding the Snatch and Squat. (Co-presenter: Piper, T. and Waller, M.) Orlando, FL. July 14-17. 2010.
23. 2009 NSCA Sports-Specific Training Conference. Training Eccentric Actions for Athlete Preparation. (Co-presenter: DiNaso, J. and Waller, M.) Nashville, TN. January 9 & 10, 2009.
24. 2008 NSCA National Conference. Separating Deadlifts from Weightlifting Pulls through a Technical and Practical Perspective. Las Vegas, NV. July 9 – 12. 2008.
25. 2006 NSCA Illinois Strength and Conditioning Clinic. NSCA Steroid Education Awareness Program. Elk Grove Village, IL. May 20, 2006.
26. 2005 NSCA Illinois Strength and Conditioning Clinic. Application and Use of the Kettlebell. Downers Grove, IL. January 29, 2005.
27. 2005 NSCA Michigan State Clinic Presenter: Program Design for the Personal Trainer. Albion, MI. April 2005.
28. 2004 NSCA Illinois Personal Training Clinic. Program Design for the Personal Trainer. October 24, 2004.

29. 2002 NSCA National Conference. Application of Weightlifting Movements for the Personal Trainer. Las Vegas, NV. July 10 – 13. 2002.

**Professional Presentations (Non-NSCA):**

1. Great Lakes Athletic Trainers Association Annual Clinical Symposium. St. Charles, IL. (Co-Presenter: Townsend, R, Piper, T, and Waller, M.) Application of Weightlifting Movements for the Athletic Trainer. St. Charles, IL. March 8, 2007.
2. Lake County Region of the American Cancer Society at Fortune Brands, Inc. Nutrition and Exercise. Lincolnshire, IL July 27, 2004.
3. Preparing, Teaching, and Applying the Weightlifting Movements Clinic. Highland Park Hospital Health and Fitness Center. Buffalo Grove, IL. February 8, 2003.

**Professional Continuing Education Clinic Director/Organizer (Non-NSCA):**

1. Fall Sports Conditioning Clinic. Highland Park Hospital Health and Fitness Center. Buffalo Grove, IL. September 15, 2001.
2. Strength and Health Clinic. Highland Park Hospital Health and Fitness Center. Buffalo Grove, IL. November 18, 2000.

**Peer-Reviewed Articles:**

1. Waller, M, Aghabozorg, R, Campagna, D, and Shim, A. The effect of heel lift inserts on clean jump shrugs and loaded vertical countermovement jumps. *Medicina Sportiva – The Journal of Romanian Sport Medicine Society*. 16(2): 3245-3251, 2020.
2. Fox, HE, Shim, A, and Waller, M. Does A Relationship Exist Between Range Of Motion And Proprioception Of The Ankle In Athletes. *Medicine & Science in Sports & Exercise* 52(5S) ACSM May 26-30, 2020.
3. Shim, A, Prichard, S, Newman, D, Lara, C, and Waller, M. Does A Recumbent Lateral Stability Trainer Improve Balance Scores Among Older Adults Within 4 Weeks?: 2696 Board #157 May 29 10:30 AM - 12:00 PM, *Medicine & Science in Sports & Exercise* 52(5S) ACSM May 26-30, 2020..
4. Brown, JR, Macklin, I and Waller, M. Using the Nordic Hamstring Exercise to Reduce Hamstring Injuries in Gaelic Football. *Strength and Conditioning Journal*. 42(2):1-5. 2020.
5. Waller, M, Shim, A, and Piper, T. Strength and conditioning off-season programming for high school swimmers. *Strength and Conditioning Journal*. 41(5):79-85. 2019.
6. Caterisano, A, Decker, D, Snyder, B, Feigenbaum, M, Glass, R, House, P, Sharp, C, Waller, M. and Witherspoon, Z. CSCCa & NSCA Joint Consensus Guidelines: Safe Return to Training from a Period of Inactivity. *Strength and Conditioning Journal*. 41(3):1-23. 2019.

7. Bubke, CJ, Shim, A, Ruppert, T, and Waller, M. Adaptations to balance training using the Shuttle TNT System in female NAIA athletes. *Medicina Sportiva – The Journal of Romanian Sport Medicine Society*. 25(1):3030-3035, 2019.
8. Shim, A, Harr, B, and Waller, M. Does a Relationship Exist Between Lower Body Power and Balance Scores Among Older Adults? *The Permanente Journal* 22:17-096, 2018.
9. Waller, M. and Macke, H. An applied five-week off-season strength and conditioning program for collegiate female volleyball. *NSCA Coach*. 5.1: 44-47, 2018.
10. Waller, M, Robinson, T, Holman, D, and Gersick, M. The effects of repeated push sled sprints on blood lactate, heart rate recovery and sprint times. *Journal of Sports Research*. 3(1): 1-9, 2016.
11. Waller, M, Gersick, M, Townsend, R, and Ford, C. Strength and Conditioning Preparation for the Transitional Track and Field Thrower. *Strength and Conditioning Journal*. 36(6):71-78. 2014.
12. Brown, JR, Alsarraf, BJ, Waller, M, Eisenman, P, and Hicks-Little, C. Rotational Angles and Velocities During Down the Line and Diagonal Across Court Volleyball Spikes. *International Journal of Kinesiology & Sports Science*. 2(2), 1-8. 2014
13. Brown, J and Waller, M. Needs analysis, physiological response and program guidelines for Gaelic football. *Strength and Conditioning Journal*. 36(2):73-81. 2014.
14. Waller, M, Gersick, M, and Holman, D. Various jump training styles for improvement of vertical jump performance. *Strength and Conditioning Journal.* 35(1): 82-89. 2013.
15. Piper, T, Jacobs, E, Haiduke, M, Waller, M, and McMillan, C. Core Training during Pregnancy. *Strength and Conditioning Journal.* 34(1): 55-62. 2012.
16. Waller, M, Miller, J, and Hannon, J, Resistance Circuit Training: Its Application for the Adult Population. *Strength and Conditioning Journal*. 33(1): 16-22. 2011.
17. Miller, J, Eisenman, PA, Waller, MA, Van Haitsma, TA, and Williams, DP. Identification of position-specific combine test score thresholds for drafted and non-drafted defensive players entering the National Football League. *Journal of Strength and Conditioning Research*. 24(1): 1. 2010.
18. Waller, M, Piper, T, and Miller, J. Instructing Overhead Pressing Power/Strength Movements. *Strength and Conditioning Journal*. 31(5): 39-49. 2009.
19. Waller, M, Piper, T and Miller, J. Coaching and Discussion of the Snatch/Clean Pulls along with the High-Pull Variation. *Strength and Conditioning Journal.* 31(3): 47-54. 2009.
20. Waller, M, and Townsend, R. The Front Squat and Its Variations. *Strength and Conditioning Journal*. 29(6): 2-7. 2007.

21. Waller, M, Townsend, R, and Gattone, M. Application of the Power Snatch for Athletic Conditioning. *Strength and Conditioning Journal*. 29(3): 10-20. 2007.
22. Waller, M, and Hagerman, PS. Ethics of Supplement Prescription. *Strength and Conditioning Journal*. 27(1): 70-73. 2005.
23. Waller M, Cable-Pulley Training. *Strength and Conditioning Journal*. 26(6): 60–61. 2004.
24. Waller, M, Piper, T, and Townsend, R. Strongman Events and Strength and Conditioning Programs. *Strength and Conditioning Journal*. 25(5): 44–52. 2003.
25. Waller M, and Stasiek, M. ONE-ON-ONE: Medicine Ball Warm-ups. *Strength and Conditioning Journal*. 24(5): 18–19. 2002.
26. Townsend, R, and Waller, M. Progression for Teaching Weightlifting Pull Movements for a Rehabilitative Setting. *Strength and Conditioning Journal*. 24(3): 21–26. 2002.
27. Piper, TJ, and Waller, MA. Variations of the Deadlift. *Strength and Conditioning Journal*. 23(3): 66–73. 2001.
28. Waller, M. SPECIAL POPULATIONS: Strength and Conditioning for the Person with Cystic Fibrosis. *Strength and Conditioning Journal*. 23(2): 37–39. 2001.
29. Waller, M. SPECIAL POPULATIONS: Strength and Conditioning in Multiple Sclerosis Patients. *Strength and Conditioning Journal*: 22(2): 40–41. 2000.
30. Waller, MA. Strength Training for Great Lakes Sailboat Racing. *Strength and Conditioning Journal* 22(2): 58–65. 2000.
31. Piper, TJ and Waller, MA. Alternatives to Expensive Equipment. *Strength and Conditioning Journal*. 21(4): 50–53. 1999.
32. Waller, MA, and Piper, TJ. Plyometric Training for the Personal Trainer. *Strength and Conditioning Journal*. 21(2): 9–14. 1999.

**Non Peer-Reviewed Articles:**

1. Waller, M. Building a foundation for the beginning athlete. *MILO: A Journal for Serious Strength Athletes*. 25(3): 14-17. December 2017.
2. Waller, M. Upper-body Power "Plyometric" Exercises. *MILO: A Journal for Serious Strength Athletes*. 25(1): 25-27. June 2017.
3. Waller, M. Drafting the best exercises. *MILO: A Journal for Serious Strength Athletes.* 24(4): 38-41**.** March 2017.
4. Waller, M, and Piper, T. Training + Recovery = Progress. *MILO: A Journal for Serious Strength Athletes.* 21(3): 8-11**.** December 2013
5. Piper. T, and Waller, M. Why won't they listen to me? On becoming an effective coach. *MILO: A Journal for Serious Strength Athletes*. 20(1): 71-74. June 2012.
6. Piper. T, and Waller, M. Value of Variety. *MILO: A Journal for Serious Strength Athletes.* 19(4): 27-30. March 2012.

7. Waller, M, LaReaux, J, Miller, J, and Piper, T. Historical Perspectives of Strength Programming Variables *MILO: A Journal for Serious Strength Athletes.* 18(4): 93-103. March 2011.
8. Waller, M, and Piper, T. Correct Technique: Does it Matter?. *MILO: A Journal for Serious Strength Athletes.* 17(2): 113-118**.** September 2009.
9. Waller, M, and Piper, T. Powering Up the Body. *MILO: A Journal for Serious Strength Athletes.* 16(4): 45-47**.** March 2009.
10. Waller, M, and Piper, T. Increasing Lifting Strength in the Posterior Chain. *MILO: A Journal for Serious Strength Athletes.* 16(2): 28-30. September 2008.
11. Piper. T, Nudo, J, and Waller, M. Making Stones. *MILO: A Journal for Serious Strength Athletes.* 15(4): 114-116**.** March 2008.
12. Waller, M, and Piper, T. Upper Extremity Flexibility: Why Rocky Can't Clean. *MILO: A Journal for Serious Strength Athletes.* 15(3): 93-96. December 2007.
13. Piper. T. and Waller, M. Weight Gain Tips for Lean Body Mass. *MILO: A Journal for Serious Strength Athletes.* 15(2): 35-39. September 2007.
14. Piper. T, and Waller, M. Peripheral Heart Action Training. *MILO: A Journal for Serious Strength Athletes.* 14(4): 74-77. March 2007.
15. Waller, M, and Piper, T. Preparation for the Beginning Lifter. *MILO: A Journal for Serious Strength Athletes.* 14(3): 97-100. December 2006.
16. Waller, M, and Piper, T. The Odd Lifts at a USAWA Meet. *MILO: A Journal for Serious Strength Athletes.* 14(2): 21-23**.** September 2006.
17. Waller, M, and Piper, T. The Weightlifting Complex. *MILO: A Journal for Serious Strength Athletes.* 14(1): 83-84. June 2006**.**
18. Piper. T, and Waller, M. Old Man Strength or Muscles Don't Know Their Age. *MILO: A Journal for Serious Strength Athletes.* 13(4): 56-58. March 2006.

**Books:**

1. Piper, TJ, and Waller, MA. Power Training. Waller & Piper. Algonquin, IL. 2008. (ISBN 978-0-9818916-0-6)
2. Waller, M, and Piper, T. Alternative Training Methods. Waller & Piper. Algonquin, IL. 2003. (ISBN 0-9718309-9-1)

**Research Posters:**

1. Johns, N, Mastromonaco, K, Melton, M, Shim, A, and Waller, M. Does a relationship exist between hamstring flexibility and balance scores in female collegiate athletes? NSCA National Conference 2020 Virtual Research Poster Presentations, July 2020.
2. O'Connor, J., Kelly, P., Waller, M., McMahan, C., & Pederson, R. Certified Adaptive Recreational Sport Specialist-1. Paper Presented at Arkansas Council for Exceptional Children, Little Rock, AR. October, 2018.

3. Waller, M, Godfrey, J, Kraft, G, Macke, H, Young, R, Shim, A., and Mann, B. The relationship between the countermovement power push-up and bench press and throw barbell velocity. 2018 NSCA National Conference, Indianapolis, IN. July 11-14, 2018.
4. Waller, M, Shim, A, and Acheampong, S. The relationship of V-pattern sport-specific test to lower-body performances. 2017 Coaches College. Eastern Tennessee State University, Johnson City, TN. December 1-2, 2017.
5. Strutt, E. Shim, A, Waller, M, and Jung, D. Four Week Upper-Extremity Program on a Balance Device Improves Power and Stability in Collegiate Golfers. Midwest ACSM Annual Meeting. Grand Rapids, MI. November 10-11, 2017.
6. Shim, A, Harr, B, and Waller, M. Does a Relationship Exist Between Lower Body Power and Balance Scores Among Older Adults? 2017 ASICS Sports Medicine Australian Conference. Langkawi, Malaysia. October 25-28, 2017.
7. Shim, A, Waller, M, Harr, B, and Van Maanen, B. Comparison of stability scores on adult participants using commercial balance methods. 2017 ACSM Annual Meeting. Denver, CO. May 31, 2017.
8. Waller, M, Robinson, T, Holman, D, and Gersick, M. Differences in loaded-sled sprint times between female volleyball and softball players. 2013 NSCA National Conference. Las Vegas, NV. July 2013.
9. Waller, MA, AlSarraf, B, Eisenman, P, LaReaux, J, Miller, J, and Hicks-Little, C. Force-time variables of the countermovement push-up. 2012 NSCA National Conference. Providence, RI. July 2012.
10. Waller, MA, Miller, JD, and Jacques, K. Effects of reduced air flow training on upper-body performance: Pilot Study. 2010 NSCA National Conference. LasVegas, NV. July 2011.
11. Waller, MA, Miller, JD, VanHaitsma, TA, and Jacques, K. The effects of reduced airflow (hypoxic) on method on time to exhaustion and VO2max during maximal aerobic assessment cycle ergometer condition. 2010 NSCA National Conference. Orlando, FL. July 2010.
12. Miller, JD, Eisenman, PA, Waller, MA, VanHaitsma, TA, and Williams, DP. Identification of position-specific combine test score thresholds for drafted and non-drafted defensive entering the National Football League. 2009 NSCA National Conference. Las Vegas, NV July 2009.
13. Miller, JD, Park, S, Ballstedt, LT, Waller, MA, La Reaux, J, and Eisenman, PA. Caloric cost of traditional bench pressing compared to stability ball chest pressing in college-aged males. 2009 SWACSM Conference. San Diego, CA. October 2009.

**Thesis Committee Member/Chair:**

1. Committee member for Luis Gonzalez (2019) Does the Use of Strider Bikes Improve Balance in Parkinson's Patients? Master of Science Thesis. College of Saint Mary, Omaha, NE.
2. Committee member for Hannah Fox (2019) Comparison of Proprioception Scores and Muscle Strength Scores of The Ankle. Master of Science Thesis. College of Saint Mary, Omaha, NE.
3. Committee Chair for Hannah Macke (2018) The relationship of force-time variables between the loaded squat jump and the midthigh block clean pull. Master of Science Thesis. Arkansas Tech University, Russellville, AR.
4. Committee Chair for Tanya N Vassar (2013) Post-activation Potentiation Effects of Two Loaded Squat Jump Variations on Block Start and Sprint Performance. Master of Science Thesis. Adams State University, Alamosa, CO
5. Committee Chair for Dustin A Holman (2013) The Effects of Deception on Strength Measures. Master of Science Thesis. Adams State University, Alamosa, CO

**Committees**

1. Member of Academic Appeals, Arkansas Tech University, Russellville, AR. (2019-2020)
2. Member of the Graduate Council, Arkansas Tech University, Russellville, AR. (2018 – Present)
3. Institutional Review Board, Co-chair, University of Saint Francis, Fort Wayne, IN (2013 to 2016)
4. Institutional Review Board, Co-chair, Adams State University, Alamosa, CO (2012 – 2013)

**Awards:**

1. 2017, February 8: Honored for being an Inspirational Faculty member by undergraduate student Jarod Mau at Staff/Faculty Appreciation Night.
2. 2015 University of Saint Francis, Values in Action award. November 2015
3. 2010 – 2011 Certificate of Achievement for Outstanding Service to the Department, University of Utah, Department of Exercise and Sport Science
4. 2010 N.P. Neilsen Scholarship – Awarded to doctoral student to continue their pursuit of academic excellence.
5. 2008 – 2009 Outstanding ESSF Instructor, University of Utah, Department of Exercise and Sport Science

**Military Experience:**

1. Honorably Discharged 21 November 2001
2. Highest position/rank earned: Squad Leader/Sergeant

3. 814th Military Police Company, 88th Regimental Command, Arlington Heights IL, United States Army Reserve (1999 – 2001)
4. Battery A, 1st Battalion, 202d Air Defense Artillery, Marseilles IL, United States Army – Illinois National Guard (1995 – 1998)
5. 233rd Engineer Company, 33rd Infantry Brigade, Marseilles IL, United States Army – Illinois National Guard (Now Disbanded) (1990 – 1995)
6. Military Occupational Specialty: Combat Engineer – 12B

# Rockie D. Pederson, PhD

## ACADEMIC PREPARATION

| | |
|---|---|
| Terminal Degree | Texas Woman's University<br>Department of Kinesiology, Denton, TX<br>Major: Motor Learning and Control<br>Related Area: Pedagogy<br>December, 2000 |
| Graduate Degree | Master of Science in Education<br>Department of Health, Physical Education and Recreation<br>Major: Physical Education<br>Henderson State University, Arkadelphia, AR<br>August, 1980 |
| Undergraduate Degree | Bachelor of Science in Education<br>Department of Health, Physical Education and Recreation<br>Major: Physical Education<br>Minor: Art<br>Henderson State University, Arkadelphia, AR<br>May, 1979 |

## TEACHING EXPERIENCE

Arkansas Tech University, Russellville, AR. Health and Physical Education Department, Professor and Department Head, July 2019 -

Responsibilities:
- Department Head
- PE 2653 Anatomy and Physiology
- PE 4701 Special Methods in Health and Physical Education
- WS 4012 Wellness and Fitness Program Internship
- Undergraduate Faculty Advisor

Arkansas Tech University, Russellville, AR. Health and Physical Education Department, Professor and Interim Department Head, August 2018 – June 2019

Responsibilities:
- Interim Department Head
- PE 3603 Methods and Materials in Physical Education for Secondary Schools
- PE 4701 Special Methods in Health and Physical Education
- PE 6043 Psychology of Motor Learning
- WS 4012 Wellness and Fitness Program Internship
- Undergraduate Faculty Advisor

Arkansas Tech University, Russellville, AR. Health and Physical Education Department, Professor, August 2017 – August 2018

Responsibilities:
- PE 1051 Volleyball
- PE 2111 Methods of Teaching Individual Activities
- PE 3603 Methods and Materials in Physical Education for Secondary Schools
- PE 4523 Measurement and Evaluation in Health and Physical Education
- PE 4701 Special Methods in Health and Physical Education
- WS 4003 Advanced Professional Seminar
- Undergraduate Faculty Advisor

Arkansas Tech University, Russellville, AR. Health and Physical Education Department, Associate Professor and Interim Department Head, July 2015 – June 2017.

Responsibilities:
- Interim Department Head
- Graduate Faculty Advisor
- MS Strength and Conditioning Studies Program Director
- PE 3583 Methods and Materials in Physical Education for Elementary Schools
- PE 3603 Methods and Materials in Physical Education for Secondary Schools
- PE 4701 Special Methods in Health and Physical Education
- PE 6043 Psychology of Motor Learning
- PE 6063 Current Issues in Coaching and Athletics
- Undergraduate Faculty Advisor

Arkansas Tech University, Russellville, AR. Health and Physical Education Department, Associate Professor, August 2011 – June 2015.

Responsibilities:
- Undergraduate Faculty Advisor
- PE 1051 Volleyball
- PE 1201 Orientation to Health, Physical Education, and Wellness Science
- PE 2101 Methods of Teaching Team Activities
- PE 2111 Methods of Teaching Individual Activities
- PE 2513 First Aid
- PE 3413 Coaching Theory
- PE 3603 Methods and Materials in Physical Education for Secondary Schools
- PE 4513 Organization and Administration of Health and Physical Education
- PE 6023 Curriculum Development in Physical Education
- PE 6043 Psychology of Motor Learning
- Health, Physical Education, and Wellness Science Club Co-Advisor

The University of Texas at El Paso, El Paso, TX, Kinesiology Department, Clinical Associate Professor August, 2001 – July 2011

Responsibilities:
- Physical Education Teacher Education Program Coordinator
- Undergraduate Faculty Advisor
- KIN 2332 Motor Learning
- KIN 3211 Volleyball
- KIN 3313 Statistics
- KIN 3315 Principles of Teaching Physical Education
- KIN 4314 Special Populations: Characteristics/Motor Behavior
- KIN 4321 Teaching Secondary School Physical Education
- KIN 5364 Effective Teaching in Physical Education
- KIN 5373 Motor Learning and Control
- TED 4698 Student Teaching in All Levels Physical Education
- UNIV 1301 Seminar/Critical Inquiry

Mississippi University for Women, Columbus, MS, Division of Health and Kinesiology, Assistant Professor August, 1999 – May, 2001

Responsibilities:
- NCATE Coordinator
- Placement and Supervision of Student Teachers
- Undergraduate Faculty Advisor
- HK 470 Motor Learning
- HK 451 Instructional Methods for Physical Education
- HK 408 Biomechanics
- HK 371 Motor Development
- HK 370 Adapted Physical Education
- HK 351 Materials and Methods of Teaching Elementary Physical Education
- HK 350 Psychology of Exercise and Sport
- HK 340 Management of Sport and Physical Education
- HK 151 Introduction to Teaching Physical Activity
- HK 145 Bowling

HK 135 Track and Field
HK 123 Badminton and Archery

Texas Woman's University, Denton, TX, Teaching Assistant, Department of Kinesiology, August, 1997 – May, 1999

Responsibilities:
KINS 1981 Racquetball
KINS 1901 Fitness Health Laboratory
KINS 1311 Self-Defense
KINS 1291 Aerobic Dance

University of Central Arkansas, Conway, AR, Instructor, Department of Kinesiology and Physical Education, August, 1987 – May, 1997

Responsibilities:
KPED Director of Student Teaching
KPED NCATE Coordinator
Undergraduate Faculty Advisor
Aerobic Dance Coordinator
Kinesiology and Physical Education Majors/Minors Club Faculty Sponsor
KPED 4310 Methods and Materials of Secondary Physical Education
KPED 3382 Mechanical Kinesiology
KPED 3330 Physical Education for Elementary Grades
KPED 3316 Curriculum
KPED 2382 Motor Learning
KPED 2321 Recreation Administration
KPED 2214 Theory and Practice of Tennis
KPED 2200 Principles of Physical Education
KPED 1291 Concepts of Lifetime Health and Fitness
KPED 1123 Beginning Bowling
KPED 1121 Ballroom Dance
KPED 1105 Advanced Aerobics
KPED 1104 Aerobic Dance

University of Central Arkansas, Conway, AR, Instructor (Part-time), Department of Kinesiology and Physical Education, August, 1983 – May, 1984

Responsibilities:
KPED 4310 Methods and Materials of Secondary Physical Education
KPED 3330 Physical Education for Elementary Grades
KPED 2215 Theory and Practice of Archery
Assistant Women's Volleyball Coach
Women's Track Coach

Linden-Kildare CISD, Linden, TX, Teacher and Coach, August, 1980 – May, 1983

Responsibilities:
Physical Education 9 –12
Health 9
Junior Varsity Coach: Volleyball, Basketball, and Track
Junior Class Sponsor: 1981, 1982

Henderson State University, Graduate Assistant, Department of Health, Physical Education and Recreation, August, 1979- August, 1980

Responsibilities:
Women's Intramural Director

## PROFESSIONAL MEMBERSHIPS

Society of Health and Physical Educators America (SHAPE America)
American Association for Active Lifestyles and Fitness
National Association for Sport and Physical Education
Southern District American Alliance for Health, Physical Education, Recreation, and Dance

## CERTIFICATIONS

NASP Basic Archery Instructor, 2018
Arkansas Tech University College of eTech Online Certification, 2016

American Red Cross First Aid/CPR/AED Instructor, August 2011 - current
Texas Educator Certificate – Secondary Health and Physical Education (Grades 6-12) Lifetime

## HONORS, AWARDS, HONORARY SOCIETIES

Arkansas Association of Health, Physical Education, Recreation and Dance (ArkAHPERD) Jump Rope for Heart/Hoops for Heart Top Collegiate Event of the Year, 2017
Arkansas Association of Health, Physical Education, Recreation and Dance (ArkAHPERD) Higher Educator of the Year, November, 2016
Arkansas Hoops for Heart Coordinator of the Year, 2011-2012
Texas Association of Health, Physical Education, Recreation and Dance (TAHPERD) University Physical Educator of the Year, December, 2009
UT Regents Outstanding Teaching Award for Contingent Faculty, August, 2009
IMPACT Fellow, NSF Advance Institutional Transformation for Faculty Diversity, May 2004 – May 2005
General Scholarship, Texas Woman's University, May 1996, 1994
Marilyn M. Hinson Scholarship, Texas Woman's University, March, 1993

## iPad INITIATIVE

**Pederson, R.**, & O'Connor, J. (2018). Use of iPads to Monitor Student Teacher Progress in Physical Education Settings. Arkansas Tech University iPad Initiative. $4,500.00. Funded.

O'Connor, J., & **Pederson, R**. (Fall 2017). *Use of iPads to Monitor Student Teacher Progress in Physical Education Settings*. Arkansas Tech University iPad Initiative. APPROVED.

**Pederson, R,** & O'Connor, J., &. (Spring 2017). *Use of iPads to Monitor Student Teacher Progress in Physical Education Settings*. Arkansas Tech University iPad Initiative. APPROVED.

O'Connor, J., & **Pederson, R.** (Fall 2016). *Use of iPads to Monitor Student Teacher Progress in Physical Education Settings*. Arkansas Tech University iPad Initiative. AWARDED.

## PUBLICATIONS

O'Connor, J., Kelly, P., Pederson, R., & O'Connor, M. (2020). PE student teachers and technology: Perceptions of readiness. *ArATE Electronic Journal, 10*(2), 18-25.

Kelly, P., O'Connor, J., & Pederson, R. (2019). Beyond Talking the Talk: How Fit are Health and Physical Education Majors? *International Journal of Innovative Research and Knowledge*, 4(5), 15-23.

Jackson, S., Holeyfield, A., **Pederson, R.** (2014). Factor Analysis of Psychomotor Assessments in Measurement and Evaluation Classes. Arkansas Association HPERD Journal, 49(1), 11-16.

Jackson, S., Holeyfield, A., **Pederson, R**. & Strasner, J. (2012). Effects of Using Technology on Children's Ability to Perceive Exertion. Arkansas Association HPERD Journal, 47(1), 13-16.

de Heer, H. D., Koehly, L., **Pederson**, **R.,** & Morera. (2011). Effectiveness and Spillover of an After-School
Health Promotion Program for Hispanic Elementary School Children. American Journal of Public Health, 101(10), 1907-1913.

**Pederson, R.**, & Torres, N. (2009). IGUALES! Tennis on the Border – An Afterschool Program. Texas Association HPERD Journal, 77(3), 8-10.

Meeuwsen, H. J., & **Pederson, R**. (2006). Group Cohesion in Team-Based Learning. MountainRise, 13(10). Available online: http://mountainrise.wcu.edu/archive/vol3no1/html/meeuwsen.htm

Meeuwsen, H.J., King, G.A., & **Pederson, R**. (2005). Effects of cooperative learning strategy on undergraduate Kinesiololgy students' learning styles. Perceptual and Motor Skills, 101, 525-530.

Haltiwanger, E., **Pederson, R.**, & Duarte-Gardeo, M.O. (2004). Interdisciplinary service learning for community building and team-based education. Published in the Proceedings of the 2nd Annual Hawaii International Conference on Education (pp.1424-1440). Honolulu, HI: Hawaii International Conference on Education.

Schmidt, L. M., Taylor, J. E., **Pederson, R. D.**, & Bean, M. (2000). The need for promoting physical activity in healthcare settings. The Journal of Mississippi Alliance for Health, Physical Education, Recreation, and Dance, 17(2), 8-11.

**Published Abstracts**

Jackson, S., Dow, M., **Pederson, R**., Macke, H., Kraft, G., Oxendine, J. (2020). Mass versus distributed feedback on children's activity levels. Accepted published abstract in *Research Quarterly for Exercise and Sport.*

Jackson, S., Kraft, G., **Pederson, R**., Dow, M., Macke, Oxendine, J. (2020). Effects of activity tracker feedback on elementary students' activity levels. Accepted published abstract in *Research Quarterly for Exercise and Sport.*

Jackson, S., **Pederson, R.,** Kraft, G. Dow, M., Macke, H., (2020). The effect of activity trackers on meeting Arkansas state standards. Accepted published abstract in *Research Quarterly for Exercise and Sport.*

**Pederson, R. D.**, & Meeuwsen, H. J. (2001). Effect of instructional strategies on learning an invariant in archery. Journal of Sport and Exercise Psychology, 21 (Suppl.), S88.

## PRESENTATIONS

O'Connor, J., Kelly, P., Myers, K., Jackson, S., McMahan, C., & **Pederson, R**. (2019, September). ***The Audacity of PLAY: Physical education and Leisure Activities for Youth*. Session 1**. An invited presentation for the Arkansas Department of Education Special Education LEA Academy, Hot Springs, AR.

O'Connor, J., Kelly, P., Myers, K., Jackson, S., McMahan, C., & **Pederson, R.** (2019, September). ***The Audacity of PLAY: Physical education and Leisure Activities for Youth***. **Session 2**. An invited presentation for the Arkansas Department of Education Special Education LEA Academy, Hot Springs, AR.

O'Connor, J., Kelly, P., Myers, K., McMahan, C., & **Pederson, R.** (2019, July). *We Teach Unavailable Kids: An Approach to Promoting Activity, Education, Recreation, and Advocacy*. An invited presentation for the Department of Education Special Education Unit, Little Rock, AR.

O'Connor, J., **Pederson, R.**, & Kelly, P. (2018). Disability Sports Certification: CARSS I. Podium Presentation at Arkansas Association for Health, Physical Education, Recreation and Dance Convention, Conway, AR, November 8-9.

O'Connor, J., Kelly, P., Waller, J., & **Pederson, R.** (2018). Certified Adaptive Recreational Sport Specialist
– 1. Paper presented at Arkansas Council for Exceptional Children, Little Rock, AR, October 25.

Ayres, C., O'Connor, J., & **Pederson, R.** (2017). Examples of Technology Applications for Viewing Student Skill Development. Paper presented at Arkansas Association for Health, Physical Education, Recreation and Dance Convention, Little Rock, AR, November 2-3.

Kelly, P., O'Connor, J., & **Pederson,** R. (2017). Generation iY: Secrets to Connecting with Today's Teens and Young Adults in the Digital Age. Paper presented at Arkansas Association for Health, Physical Education, Recreation and Dance Convention, Little Rock, AR, November 2-3.

Tarte, C., Ayres, C., O'Connor, J., Kelly, P., & Pederson, R. (2017). Sitting Volleyball: Harder than You Think—More Fun Than You Imagine. Paper presented at Arkansas Association for Health, Physical Education, Recreation and Dance Convention, Little Rock, AR, November 2-3.

O'Connor, J., **Pederson, R**., & Kelly, P. (2017) Games, Therapy, Education, Fun: Everyone Can. Paper presented at Arkansas Council for Exceptional Children Annual Conference, Little Rock, AR, October 26-27.

Kelly, P., **Pederson, R.,** O'Connor, J., Barbay, B., Morrison, G., Rhea, E., Ayers, C., Bullard, A., Eggleton, T., & Post, M. (2017, April). An Introduction to Sitting Volleyball and Tchoukball for Individuals with Disabilities. Paper presented at the Arkansas Therapeutic Recreation Society Spring Workshop, Russellville, AR.

**Pederson, R.**, and O'Connor, J. (2016). Using Experiential Principles to Create Community. Arkansas Association for Health, Physical Education, Recreation and Dance Convention, Little Rock, AR, November 3-4.

Kelly, P., and **Pederson, R.** (2016). Tchoukball II. Arkansas Association for Health, Physical Education, Recreation and Dance Convention, Little Rock, AR, November 3-4.

**Pederson, R.**, and Smith, K. (2015). Secondary Physical Education Activities: Emphasis on Fitness. Arkansas Association for Health, Physical Education, Recreation and Dance Convention, Eureka Springs, AR, November 5-6.

**Pederson, R.** (2015). Fitness Activities for Secondary Physical Education. ArkAHPERD District II Summer Physical Education Workshop. Arkansas Tech University, Russellville, AR, June 13.

**Pederson, R.**, and Walters, D. (2014). Integrating Common Core in a Blended Methods Course. Arkansas Association for Health, Physical Education, Recreation and Dance Convention, Little Rock, AR, November 6-7.

**Pederson, R.**, and Kelly, P. (2014). Tchoukball. Arkansas Association for Health, Physical Education, Recreation and Dance Convention, Little Rock, AR, November 6-7.

Baquera, R., **Pederson, R.,** Bates, L., Burger, A., Gonzalez, F., Hernandez, S., Ochoterena, O., Padilla, M., Torres, K., and Whitwam, S. (2013). Ozark Mountains to Rocky Mountains: Bringing Ranges of Experience Together. 90th Texas Association for Health, Physical Education, Recreation, and Dance Conference, Dallas, TX, December 4-7.

**Pederson, R.,** Baquera, R., Atkins, J., Corral, V., Jones, B., Jumper, K., and Rojero, J. (2013) Broadening PETE's Horizons – Engaging Pre-service Teachers in Collaborative Activities. 90th Texas Association for Health, Physical Education, Recreation, and Dance Conference, Dallas, TX, December 4-7.

**Pederson, R.,** Baquera, R., Atkins, J., Bailey, E., Burger, A., Rojero, J., and Torres, K. (2013). Expanding PETE Students' Perceptions: Engaging Pre-Service Teachers in Collaborative Activities. Arkansas Association for Health, Physical Education, Recreation and Dance Convention, Little Rock, AR, November 7-8.

Baquera-Shaw, R**., Pederson, R.,** and Torres, N. (2012). Molding Critical Reflective Practitioners in PETE across Southern District. 89th Texas Association for Health, Physical Education, Recreation, and Dance Conference, Galveston, TX, November 29 - December 1.

**Pederson, R**., Baquera-Shaw, R., and Torres, N. (2012). Mining with Diamonds: Sustaining Collegiality and Collaboration Across Southern District. Physical Education Teacher Education Conference, Las Vegas, NV. October 3-6.

de Heer, H., Morera, O., and **Pederson, R.** (2010). Project L.E.A.N.: An After-School Health Education and Physical Activity Program for Elementary School Children in El Paso, TX. 11th International Congress of Behavioral Medicine, Washington, D.C., August 4 – 7.

Torres, N., **Pederson, R**., and Baquera-Shaw, R. (2010). Look Before You Leap: The Realities of Teaching. The International Sun Conference on Teaching and Learning, UTEP, El Paso, TX, March 4 – 5.

Baquera-Shaw, R, Torres, N., and **Pederson, R**. (2010). Where's the money? Grant Writing 101. The International Sun Conference on Teaching and Learning, UTEP, El Paso, TX, March 4 – 5.

**Pederson, R**., Baquera-Shaw, R., and Torres, N. (2010). Through the Looking Glass: Creating Reflective Teachers. The International Sun Conference on Teaching and Learning, UTEP, El Paso, TX , March 4 – 5.

**Pederson, R.** (2009). Trail Riding: From the Basics to Horse Camping. Texas Association for Health, Physical Education, Recreation, and Dance Conference; Arlington, TX, December 2 – 5.

Baquera-Shaw, R., Torres, N, and **Pederson, R.** *(*2009). Under Construction: Unique Tools for Preparing Quality Physical Educators. Texas Association for Health, Physical Education, Recreation, and Dance Conference; Arlington, TX, December 2 – 5.

**Pederson, R.**, Baquera-Shaw, R., and Torres, N. (2009). Quality Physical Education: Tools That Promote Learning. Yselta ISD Professional Development, Eastwood High School, October 24, 2009.

**Pederson, R.**, Baquera-Shaw, R., and Torres, N. (2009). CHARACTER: Adventures in Physical Education. Region 19 TAHPERD, Anthony HS, El Paso, TX, January 5, 2009.

**Pederson, R.,** Baquera-Shaw, R., and Torres, N. (2009). Full Circle: Growing Our Own PETE Faculty. National Association of Sport and Physical Education Physical Education Teacher Education Conference, Myrtle Beach, SC, October 8 – 10.

**Pederson, R.**, Baquera-Shaw, R., and Torres, N. (2009). CHARACTER: Adventures in Physical Education. Region 19 Texas Association for Health, Physical Education, Recreation, and Dance Conference, Anthony HS, El Paso, TX, January 5.

Baquera-Shaw, R., Torres, N., **Pederson, R.,** Logsdon, J., Flores, T., Lozano, V., and De La Riva, I. (2008). Teacher? Facilitator? Integrating Adventure Curricula into PETE. Texas Association for Health, Physical Education, Recreation, and Dance Conference; Corpus Christi, Texas, December 3 - 6.

**Pederson, R.**, Torres, N., Baquera-Shaw, R., Parris, C., Sanchez, Y. and Nava, L. (2008). Formal Training for PE Student Teacher Mentors. Texas Association for Health, Physical Education, Recreation, and Dance Conference; Corpus Christi, Texas, December 3 - 6.

Torres, N., **Pederson, R.,** Baquera-Shaw, Flores, T., Parris, C., Sanchez, Y. and Guerra, G. (2008). Practicing our Teaching Skills in the Real World. Texas Association for Health, Physical Education, Recreation, and Dance Conference; Corpus Christi, Texas, December 3 - 6.

**Pederson, R.**, Torres, N., & Hernandez, F. (2007). Developing an After School Program Integrating

Physical Activity and Health. Texas Association for Health, Physical Education, Recreation, and Dance Conference; Galveston, Texas, November 29 – December 1.

Torres, N., Hargrove, W., & **Pederson, R.** (2007). Regular or Adapted PE? Preparing Teachers to Make Placement Decisions. Texas Association for Health, Physical Education, Recreation, and Dance Conference; Galveston, Texas, November 29 – December 1.

Murphy, L., Flores, D., Andino, R., Reade, T., **Pederson, R**., and Torres, N. (2007). What We Learned from an After School Activity Program. Texas Association for Health, Physical Education, Recreation, and Dance Conference; Galveston, Texas, November 29 – December 1.

**Pederson, R.**, & Torres, N. (2007). Ysleta Independent School District Job-alike Professional Development Day "High School Curriculum Issues", August 22, 2007. 9:10 -10:30 am, Eastwood Knolls Middle School, El Paso, TX.

**Pederson, R.**, & Meeuwsen, H. (2006). The Environmental Context Impacting Physical Education: Understanding School and Community Variables. Texas Association for Health, Physical Education, Recreation, and Dance Conference; Fort Worth, Texas, November 29 – December 2.

Meeuwsen, H., & **Pederson, R.** (2006). Stepping It Up: Combining Team-Based Learning & Critical Thinking Strategies to Increase Student Thinking in College Courses. Texas Association for Health, Physical Education, Recreation, and Dance Conference; Fort Worth, Texas, November 29 - December 2.

**Pederson, R.**, & Meeuwsen, H. (2006). Preparing Teacher Candidates for Ethical Dilemmas in Field Experiences and Student Teaching. National Association for Sport and Physical Education (NASPE) Conference on Physical Education Teacher Education, Hilton Long Beach Hotel and Executive Meeting Center, Long Beach, CA, October 12 – 14.

Meeuwsen, H., & **Pederson, R**. (2006). Do Students Exposed to Team-Based Learning Strategies Start to Like Each Other? The SUN Conference on Teaching and Learning, The University of Texas at El Paso, El Paso, TX, March 3 & 4.

Meeuwsen, H., **Pederson, R.**, Dorgo, S., & King, G. (2006). Connections and collaborations: We got 'em!! National Association for Kinesiology and Physical Education in Higher Education Annual Conference, San Diego, CA, January 4 - 7.

**Pederson, R.**, & Ramirez, P. (2006). Mentor training. Region 19 Texas Association for Health, Physical Education, Recreation, and Dance Conference; Ysleta High School, El Paso, Texas, January 5.

**Pederson, R.** (2005). Student Teachers and Ethics. Texas Association for Health, Physical Education, Recreation and Dance Annual Convention; Galveston, TX, November 30 – December 3, Corpus Christi, TX.

Meeuwsen, H., & **Pederson, R.** (2005). Do We Assume or Do We Know? Assessing the True Impact of Our Curricula on Student Learning. National Association for Kinesiology and Physical Education in Higher Education Annual Conference, Tucson, AZ, January 6 – 8.

Murray, A., **Pederson, R.**, & Meeuwsen, H. (2005). Restructuring Student Teaching: Moving from a Traditional Model to an Apprenticeship Model. National Association for Kinesiology and Physical Education in Higher Education Annual Conference, Tucson, AZ, January 6 – 8.

Murray, A. & **Pederson, R.** (2004). The Paired Partnership Model of Student Teaching. Texas Association for Health, Physical Education, Recreation and Dance Annual Convention; Arlington, TX, December 1 – 4.

Meeuwsen, H.J., **Pederson, R.**, O'Quinn, G., & Keeton-Pettit, K. (2004). "Teaching Students Teamwork through Challenge Course Initiatives." The SUN Conference on Teaching and Learning, The

University of Texas at El Paso, El Paso, TX, March 5 & 6.

**Pederson, R.**, Haltiwanger, E., & Duarte-Gardeo, M.O. (2004). “When Me Becomes We: The Power of Students Collaborating.” The SUN Conference on Teaching and Learning, The University of Texas at El Paso, El Paso, TX, March 5 & 6.

**Pederson, R.** (2004). “Thirty Students. Five Teams. One Task. Team Based Learning + Collaboration = Success.” The SUN Conference on Teaching and Learning, The University of Texas at El Paso, El Paso, TX, March 5 & 6.

Haltiwanger, E., **Pederson, R.**, & Duarte, M.O. (2004). “Interdisciplinary Service Learning for Community Building and Team-Based Education.” 2nd Annual Hawaii International Conference on Education, Waikiki, Hawaii, January 3 – 6.

**Pederson, R. D.** (2003). “It’s Not Student Teaching the Way You Remember It! What’s New?” Region 19 Texas Association for Health, Physical Education, Recreation, and Dance Conference; Ysleta High School, El Paso, Texas, January 6.

**Pederson, R. D**. (2003). “I said ‘OK’ how many times??!” ?” The SUN Conference on Teaching and Learning, The University of Texas at El Paso, El Paso, Texas, March 7 & 8.

Haltiwanger, E. Duarte, M., Hatchett, B., & **Pederson, R.** (2003). “A Multidisciplinary partnership: Creating a health eating guide for El Paso.” Society for Public Health Education Midyear Scientific Conference, New Mexico State University, Las Cruces, New Mexico, June 18 – 20.

Meeuwsen, H.J., **Pederson, R.**, King, G., O’Quinn, G. (2003). “Using Challenge Course Activities to increase trust, communication and effective social behavior in multidisciplinary and multicultural settings.” American School Health Association 77th Annual School Health Conference, El Paso, TX, October 15-18.

Meeuwsen, H.J., O’Quinn, G., & **Pederson, R**. (2003). “The Impact of Challenge Courses in Kinesiology: New Adventures in Learning.” Texas Association for Health, Physical Education, Recreation and Dance Annual Convention; Galveston, TX, December 3 – 6.

**Pederson, R.** (2003). “A Different View of Student Teaching.” Texas Association for Health, Physical Education, Recreation and Dance Annual Convention; Galveston, TX, December 3 – 6.

**Pederson, R. D.** (2002). “Technology in PETE Programs: Possible? You Bet!!” Texas Association for Health, Physical Education, Recreation, and Dance Conference; Fort Worth, TX, December 4-7.

Schmidt, L. M., Taylor, J. E., **Pederson, R. D.**, & Bean, M. (2001). “Symposium on Physical Activity in Health Care Settings.” Research Consortium: Health Division. Southern District American Alliance of Health, Physical Education, Recreation, and Dance; Birmingham, Alabama, February.

Kuykendall, L. A., Billingsley, A., Schmidt, L. M., Taylor, J. E., & **Pederson, R. D.** (2001). “Symposium on Diabetes Education Interventions in Clinical Settings.” Research Consortium: Health Division. Southern District American Alliance of Health, Physical Education, Recreation, and Dance; Birmingham, Alabama, February.

Rathbun, A., **& Pederson, R. D.** (1998). "Throw Away the Rules: Teaching Creative Labs for a College Wellness Course;" Texas Association for Health, Physical Education, Recreation, and Dance; Houston, Texas; December 2-5.

Jackson, S. L., & **Pederson, R. D.** (1997)."Biomechanical Analysis of Badminton Serves Using Standard and Body Scaled Equipment: A Perception-Action Perspective;" XV International Symposium on Biomechanics in Sports; Texas Woman's University, Denton, Texas; June 21-25.

Pederson, N. L., **Pederson, R. D.**, and Strain, D. (1996). "There's a Rock in My Garden" (Adapted Physical Education); Arkansas Association for Health, Physical Education, Recreation, and Dance; Hot Springs, Arkansas; December 1-3.

**Poster Presentations**

Jackson, S., Dow, M., **Pederson, R**., Macke, H., Kraft, G., Oxedine, J. (2020). Mass versus distributed feedback on children's activity levels. To be presented at SHAPE America National Convention, April 2020, Salt Lake City, Utah.

Jackson, S., Kraft, G., **Pederson, R**., Dow, M., Macke, H., & Oxendine, J. (2020). Effects of activity tracker feedback on elementary students' activity levels. To be presented at SHAPE America National Convention, April 2020, Salt Lake City, Utah.

Jackson, S., **Pederson, R**., Kraft, G., Dow, H. & Macke, H. (2020). Using activity trackers to meet Arkansas technology and physical education standards. To be presented at SHAPE America National Convention, April 2020, Salt Lake City, Utah.

O'Connor, J., **Pederson, R.**, and Kelly, P. (2018). PE Student teachers and Technology: Perceptions of Readiness. Arkansas Association for Health, Physical Education, Recreation and Dance Convention, Conway, AR, November 8-9.

Kelly, P., O'Connor, J., and **Pederson, R**. (2018) How FIT are our Arkansas Tech University HPE Students? Arkansas Association for Health, Physical Education, Recreation and Dance Convention, Conway, AR, November 8-9.

O'Connor, J., **Pederson, R**., and Kraft, G. (2016). An Analysis of BMI in Elementary School Children in North Louisiana. Arkansas Association for Health, Physical Education, Recreation and Dance Convention, Little Rock, AR, November 3-4.

**Pederson, R.** (2006). Ethical or Not? Preservice Teachers' Regarding Professional Behavior. American Alliance for Health, Physical Education, Recreation and Dance. National Convention & Exposition; Salt Lake City, UT; April 25-29.

**Pederson, R. D.**, & Meeuwsen, H. (2001). "Effect of Instructional Strategies on Learning an Invariant Feature in Archery." North American Society for the Psychology of Sport and Physical Activity; St. Louis, Missouri, June.

**Pederson, R. D.**, & Pederson, N. L. (1984). "Tibial Subluxation during Selected Ranges of Knee Extension;" Central States Chapter of the American College of Sports Medicine; Stillwater, Oklahoma; October 25-26.

## GRANTS

### Arkansas Tech University

Cabell, L., O'Connor, J., Waller, M., Kraft, G., Kelly, P., & **Pederson, R.** (2018, Spring). The Effect of Active Learning Strategies on Perceptions of Technology Use and Perceptions of Learning Environment. Steelcase Education Active Learning Center Grant. $67,000.00. (NOT Funded)

**Pederson, R.** (2018). College of Education Professional Development Grant -- $488. Attend and present at Arkansas Association of Health, Physical Education, Recreation, and Dance (ArkAHPERD) Annual Conference, Conway, AR. November 8-9.

**Pederson, R.** (2017). College of Education Professional Development Grant -- $488. Attend and present at Arkansas Association of Health, Physical Education, Recreation, and Dance

(ArkAHPERD) Annual Conference, Little Rock, AR. November.

**Pederson, R.** (2016). College of Education Professional Development Grant -- $394. Attend and present at Arkansas Association of Health, Physical Education, Recreation, and Dance (ArkAHPERD) Annual Conference, Little Rock, AR. November.

**Pederson, R.** (2015). College of Education Professional Development Grant -- $394. Attend and present at Arkansas Association of Health, Physical Education, Recreation, and Dance (ArkAHPERD) Annual Conference, Little Rock, AR. November.

**Pederson, R.** (2015). College of Education Professional Development Grant -- $500. Attend and present at Arkansas Association of Health, Physical Education, Recreation, and Dance (ArkAHPERD) Annual Conference, Eureka Springs, AR. November.

**Pederson, R.** (2014). College of Education Professional Development Grant -- $334.84. Attend and present at Arkansas Association of Health, Physical Education, Recreation, and Dance (ArkAHPERD) Annual Conference, Little Rock, AR. November.

**Pederson, R.** (2014). University Professional Development Grant - $1547. Attend Society of Health and Physical Education (SHAPE) America National Convention and Expo, Seattle, WA. March.

**Pederson, R.** (2013). University Professional Development Grant -- $497. Attend and present at Arkansas
Association of Health, Physical Education, Recreation, and Dance (ArkAHPERD) Annual Conference, Little Rock, AR. November.

**Pederson, R.** (2012). College of Education Professional Development Grant -- $105. Attend and present at Texas Association of Health, Physical Education, Recreation, and Dance Annual Conference, Galveston, TX. November.

**Pederson, R.** (2012). University Professional Development Grant -- $836. Attend and present at Texas Association of Health, Physical Education, Recreation, and Dance Annual Conference, Galveston,
TX. November.

**Pederson, R.** (2012). College of Education Professional Development Grant -- $150. Attend and present at Arkansas Association of Health, Physical Education, Recreation, and Dance (ArkAHPERD) Annual Conference, Little Rock, AR. November.

**Pederson, R.** (2012). University Professional Development Grant -- $1,303. Attend and present at National Association of Sport and Physical Education Physical Education Teacher Education Conference, Las Vegas, NV. October.

**Pederson, R.** (2011). Faculty Development Grant. Attend Arkansas Association of Health, Physical Education, Recreation, and Dance (ArkAHPERD) Annual Conference, Little Rock, AR. November.

**The University of Texas at El Paso**

**Pederson, R**., Torres, N., Baquera-Shaw, R. (2008). IGUALES AfterSchool Tennis Program. Community OutReach Program (CORP) Proposal, College of Health Sciences. Submitted October 18, 2008. Approved January 27, 2009. Total: $10,.000.00

Pathways to Borderland Fitness. PI: Don Disney. (2007). Carol M. White Physical Education Program Grant. $750,000. Evaluator funded at $81,900.

**Pederson, R**., and Torres, N. (2007). IGUALES AfterSchool Tennis Program. Community OutReach Program (CORP) Proposal, College of Health Sciences. Submitted October 22, 2007. Approved

November 20, 2007. Total: $10,.000.00

Morera, O.F., de Heer, H., and **Pederson, R**. (2007). LEAN: Learning Exercise through Academics in your
Neighborhood – A randomized trial of an exercise/health after school program. Center for Border Health Research. Funded: September, 2007; $74,542.00

Meeuwsen, H., **Pederson, R.,** and Torres, N. (2007). EPCC – MS Health Literacy Grant. Funded: 4/1/2007 – 3/31/2008; $10,000.

**Pederson, R.,** Torres, N., Hernandez, F., and Smith, D. (2006). IGUALES After School Tennis Program. DEUCE: Disparity Elimination Using Care & Exercise Grant, United States Tennis Association. Funded: December, 2006; $12,000.

Dorgo, S., King, G., and **Pederson, R.** (2005). The effects of Manual Resistance Training on fitness test achievement scores and exercise behavior in Hispanic adolescents. Hispanic Health Disparities Research Center, NIH: NCMHD 5 P20 MD000548-02. Funded: July, 2005; $21,000.

Meeuwsen, H.J., **Pederson, R**., Modave, F. Lush, G.B., & Brenzovich, G. T. (2004). Development of a Comprehensive Marksmanship Training System (MTS©). Submitted to the Army Research Laboratories, one year project proposal at $52,635.

Dorgo, S., & **Pederson, R.** December, 2003. Master Physical Education Teachers' Practical Knowledge. University Research Initiative. Grant amount: $3,000.00

King, G., Smith, D., O'Quinn, G., Dorgo, S., **Pederson, R**., & Brooks, T. Submitted to Border Health Promotion Center, El Paso, TX: Physical Activity Initiative Grant, November, 2003. Grant amount: $65,000.00

Zapata, L., Menjivar, N., Willis, J., Deemer, S., Vielledent, L., Haltiwanger, E., **Pederson, R.,** & Duarte, M. Development of a Menu Guide to El Paso Restaurants for Diabetics. Submitted to Paso del Norte Health Foundation, El Paso, TX: HOT Projects, July 2003. Faculty Advisor. Grant amount: $2300.00

**University of Central Arkansas**

Foundation Grant, November 1996. Crisis Intervention Training for Pre-Service and In-Service Teachers. Grant = $600.00
Faculty Development Grant, May 1996. Grant (Terminal Degree Coursework) = $300.00

Professional Education Unit Grant, March 1996. Travel Grant (AAHPERD Conference) = $350.00

## GRADUATE COMMITTEES

**The University of Texas at El Paso**

Graduate Project or Thesis Chair:

| | |
|---|---|
| Chris Estrada | Effects of Selected Physical Activities on Maintenance of Target Heart Rate in Hispanic Middle School Students – Spring 2009 |
| Phuong Ramirez | The Impact of Mentor Training on Physical Education Mentors' Effectiveness – Spring 2006 |
| Kristen Haidle | Innovation of the Physical Education Teacher Education Curriculum |
| Jeff Ferroglia | The Future of Secondary Physical Education on the World Wide Web: A Study of Student and Teacher Perceptions |

| | |
|---|---|
| Ana Cisneros | Mentor Training for Physical Education Cooperating Teachers – Fall 2009 - |

Graduate Project or Thesis Committee Member:

| | |
|---|---|
| Phuong Ramirez | The Impact of Mentor Training on Physical Education Mentors' Effectiveness - Fall 2006 |
| Greg Hatch, MS | Integrating Physical Education into Math, and Physics |
| Sandra Terrazas | Breast Cancer: Lymphedema and Exercise |
| John Adams | Progression Skills in Physical Education and Their Effect on Middle School Success – Fall 2001 |
| Dora Pichardo | What Motivates Young Latina Females Along the US/Mexico Border Region to Participate in Team Sports? |

Dissertation Committee Member:

| | |
|---|---|
| Hendrik de Heer | Project L.E.A.N.: Learning Exercise through Academics in your Neighborhood – Spring 2008 |
| Dejan Magoc | The Evaluation of a Web-Based physical Activity Intervention in a Predominantly Hispanic College Population |

**Mississippi University for Women**

Committee Member:

| | |
|---|---|
| Autumn Anderson | Application of the Job Strain Model to Female Collegiate Softball Players. 2001 |
| Lee Ann Kuykendall | Assessing Community Understanding and Knowledge Following Exposure to a Diabetes Clinical Education Program. 2000 |
| Patty Jones | An assessment of hypertension and job strain perception in African-American food service workers in a rural school district. 2000 |

## PROFESSIONAL REVIEW COMMITTEES

Reviewer for SHAPE/CAEP – 2015 - 2019
Reviewer for ING Run for Something Better School Awards Program – June 2009 -2012
Review Panel for the TExES Physical Education Teacher Certification Test, Teacher's Licensure Program at Educational Testing Service, June 13-14, 2007.
Reviewer, Appropriate Practices Documents, National Association for Sport and Physical Activity, July, 2007.
Reviewer, Carol M. White Physical Education Program, Spring 2004

## SOFTWARE

Meeuwsen, H.J., & Pederson, R. TExES Student Profile©: An Online Tool to Track Pre-Service Physical Education Teachers' Progress Towards Achieving TExES Outcomes.

## SERVICE ACTIVITIES

**Arkansas Tech University**
Hoops for Heart Coordinator, April 2012 – 2015, 2017
HPEWS Club Co-Sponsor, August 2011 – Present*

**The University of Texas at El Paso**
Faculty Senate, CHS Alternate, February 2004 – 2006
Teacher Preparation Advisory Council, March 2002 – Present
TExES Content and PPR Seminars, August 2005 - Present

**Mississippi University for Women**
Supervisor, Health & Kinesiology Division Student Teachers (MUW), August, 1999 – May, 2001

**Texas Woman's University**
TWU Graduate Student Representative: August, 1998 - May, 1999

**University of Central Arkansas**
Supervisor, KPED Student Teachers (UCA): August, 1989 - May, 1997
Coordinator, Crisis Intervention Training for Pre-Service and Inservice Teachers, Conway Public Schools: November, 1997
Co-coordinator, UCA Elementary Physical Education Workshop: August, 1990 - October, 1991
Seminar Coordinator, Student Teachers: August, 1990 - May, 1997
Kinesiology and Physical Education Majors and Minors Club Faculty Sponsor: January 1996 - May 1997
Speaker, UCA Resident Hall Association: October, 1992

## COMMITTEE MEMBERSHIPS

**Arkansas Tech University**
HPE Graduate Curriculum Committee, Fall 2017 - present
Excellence in Education Committee, Member, Spring 2017 – Spring 2018
HPE MS SCS Program Director Search Committee, Chair, Fall 2016
COE Associate Dean Search Committee, Fall 2016
Committee on Adjunct Support, Fall 2016 – Spring 2017
Academic Appeals Committee, Fall 2016 – Spring 2017
HPE MS SCS Program Director Search Committee, Chair, Spring 2016
HPE Exercise Science Search Committee, Chair, Fall 2015
HPE Elementary Pedagogy Search Committee, Chair, Fall 2015
Strategic Planning: Student Support Work Group – Fall 2015
HPE Search Committee, Spring 2015
Library, Instructional Materials, and Equipment Committee, Fall 2014 – Spring 2015
Faculty Workload Committee – Fall 2014
College of Education Professional Development Committee, Chair – Fall 2014
College of Education Assessment Committee - 2013

**The University of Texas at El Paso**
KIN Search Committee Chair, Lecturer Position, Fall 2004/Spring 2005
CHS Faculty Senate (Alternate), March 2004 - Present
KIN Search Committee Chair, Lecturer Position, Summer 2003
CHS Faculty Organization – Spring 2005 – Fall 2000
CHS Undergraduate Curriculum Committee – Fall 2005 – Present
Teachers for a New Era (TNE) Fine Arts Work Group – Spring 2005 - Present
ExCET/TExES Steering Committee – Fall 2005 – Present
College of Education Hiring Committee – Spring 2006
Disabled Student Services Accommodations Review Committee – Spring 2006 - Present
Student Conduct Committee – Fall 2006 – Spring 2008 (Chair Fall 2007- Spring 2008)
Undergraduate Curriculum Committee – Fall 2005 – present
Clinical Merit Evaluation Committee – Spring 2007 – present
Merit Rubric Committee – April 2007 – present
BMS Advisory Committee – Spring 2007 – present
TNE Induction Ad Hoc Committee – Spring 2008
Top 10 Senior Selection Committee – Spring 2008 – present
Center for Arts and Science Education Committee – Fall 2009 - present

**Mississippi University for Women**
Athletic Advisory, Member: August, 1999 – May, 2001
Faculty Appeals, Member: August, 2000 – May, 2001
Student Grievance, Member: August, 1999 – May, 2001
Teacher Education Council, Member: August, 1999 – May, 2001
Teacher Education Unit, Member: August, 1999 – May, 2001

Health & Kinesiology Division Curriculum Committee, August, 1999 – May, 2001

**University of Central Arkansas**

Professional Education Council Curriculum Development Committee, Member: January, 1997 - May, 1997
KPED Outstanding Major Committee, Chair: January 1996 - May 1997
KPED Curriculum Committee, Member: August, 1995 - May, 1997
KPED Facilities Committee, Member, August, 1995 - May, 1997

**John O'Connor, Ph.D., CAPE, CARSS**
Associate Professor

Health and Physical Education Department, Arkansas Tech University, 1306 North El Paso Ave., Russellville, AR 72801
Phone: 479 – 567 – 8344
E-mail: joconnor1@atu.edu; apephd@gmail.com

**ACADEMIC PREPARATION**

2000 Doctor of Philosophy (**Ph.D.**)
Specialization: Adapted Physical Education
Related Area: Exercise Science, Statistics
Texas Woman's University, Denton, TX
Dissertation: Bibliometric Analysis of Pedagogy Literature in Adapted Physical Activity
Degree Awarded: August 2000

1995 Master of Science (M.S.)
Specialization: Adapted Physical Education
Minor: Exercise Science
Louisiana Tech University, Ruston, LA
Degree Awarded: Aug 1995

1990 Bachelor of Science (B.S.)
Health and Physical Education
Louisiana State University in Shreveport, Shreveport, LA
Degree Awarded: Dec 1990

**CERTIFICATIONS**

Louisiana Teaching Certificate # 535221
Special Education – Significant Impairments K-12
Out of Field Authorization to Teach (OFAT)

Louisiana Class A Teaching Certificate #A 507901
Health and Physical Education K – 12
Adapted Physical Education (LCAPE)
Valid for Life

Certified Adapted Physical Educator (CAPE)
National Consortium for Physical Education and Recreation for Individuals with Disabilities (NCPERID), American Alliance for Health, Physical Education, Recreation, and Dance

Autism Exercise Specialist CEC Course (AES)
American College for Sports Medicine

Certified Adaptive Recreational Sport Specialist (CARSS) # 11-2019-15-001
BlazeSports Institute of Adaptive Sports and Recreation
BlazeSports America, Norcross, GA

Destination Imagination Team Manager
Bossier Parish Schools, Bossier City, LA

Nonviolent Crisis Intervention Training
Crisis Prevention Institute
Bossier Parish Schools, Bossier City, LA

Emergency Medical Technician – Basic (lapsed)

American Red Cross Certifications (lapsed)
Water Safety Instructor Trainer (WSI-IT), Water Safety Instructor (WSI), Lifeguard Training Instructor Trainer (LGT-IT), Lifeguard Training Instructor (LGT-I), Basic Life Support: CPR for the Professional Rescuer Instructor (BLS-I)

**PROFESSIONAL MEMBERSHIPS**

Council for Exceptional Children (CEC)
Arkansas Council for Exceptional Children (ArkCEC)
International Physical Literacy Association (IPLA)

**PROFESSIONAL EXPERIENCE**

**2016 (August– Present)**
**Associate Professor**
**Health and Physical Education Department**
**Arkansas Tech University, Russellville, AR**
Physical Education Teacher Education, Adapted Physical Education, Graduate Faculty
Courses Taught:
PE 1201 Orientation to Health, Physical Education, and Wellness Science
PE 1901 Beginning Swimming
PE 1911 Racquetball
PE 3103 Methods of Teaching Movement Patterns and Activities in Elementary Grades
PE 3583 Methods and Materials in Physical Education and Recreation for Elementary Grades
PE 4103 Adapted Physical Activity
PE 4203 Adapted Physical Education
PE 4523 Measurement and Evaluation
PE 6043 Motor Learning and Control
Service:
Article Reviewer
*Palaestra*, Reviewer
*SHAPE Arkansas Journal*, Editorial Board, Reviewer
*ArATE Electronic Journal*, Reviewer
Adapted Physical Education Consultant
Children's Hospital: Physical Therapy Department, Little Rock, AR
ACCESS Group Inc., Little Rock, AR (Charter school for individuals with intellectual disabilities)
Autism Quality Indicators Stakeholder Committee – Health and Safety
Easter Seals Outreach Program Project
Arkansas Department of Education
Special Education Unit
Local School Districts

2018 – 2019
Interdisciplinary Research Center
Director, College of Education
Arkansas Tech University, Russellville, AR

2015 – 2016 (Jan 2015 – June 2016)
Special Education Teacher – Significant Impairments
Webster Junior High School, Minden, LA
(Students 9 to 14 years of age with severe, multiple disabilities, and medical conditions)

2013 – 2014
Special Education Teacher – Significant Impairments
Bossier High School, Bossier City, LA
(Students 15 to 21 years of age with severe, multiple disabilities)

2010 – 2013
Adapted Physical Education Teacher – Significant Impairments Emphasis
Kerr Elementary School, Bossier City, LA
(Students 4 to 21 years of age with moderate to severe, multiple disabilities, autism spectrum disorder, intellectual disabilities, cerebral palsy, visual impairments, hospital homebound)

2008 – 2010
Associate Professor; Program Coordinator of Physical Education Teacher Education
Department of Kinesiology and Health Sciences
Louisiana State University in Shreveport, Shreveport, LA
Physical Education Teacher Education, Program Coordinator
Adapted Physical Education
Graduate Faculty
2006 – 2008
Associate Professor; Program Coordinator of Physical Education Teacher Education
Department of Education
Montana State University – Northern, Havre, MT
Physical Education Teacher Education, Program Coordinator
College of Education, Arts and Sciences, and Nursing
2003 – 2006
Assistant Professor; Program Coordinator of Physical Education Teacher Education
Department of Health and Exercise Sciences
Louisiana Tech University, Ruston, LA
Physical Education Teacher Education, Program Coordinator
Adapted Physical Education
Graduate Faculty
1999 – 2003
Assistant Professor; Director, Master's Program in Adapted Physical Education
Department of Kinesiology and Health Education
Southern Illinois University Edwardsville, Edwardsville, IL
Physical Education Teacher Education
Adapted Physical Education, Graduate Program Coordinator
Graduate Faculty
1994 – 1997
Adapted Physical Education Teacher
Bossier Parish School Board, Bossier City, LA
(Students 4 to 21 years of age with moderate to severe, multiple disabilities, autism spectrum disorder, intellectual disabilities, cerebral palsy, hospital homebound, community based instruction)
1991 – 1994
Teacher
Public and Private School Teacher
Bossier City, LA
Adapted Physical Education Teacher - Caddo Parish School Board, Shreveport, LA
Classroom Teacher, Self-Contained Classroom, Sixth Grade – Christ the King Catholic School, Bossier City, LA
1991
Adjunct Faculty
Department of Health and Physical Education
Louisiana State University in Shreveport, Shreveport, LA
1985 – 2006
Safety Services Instructor
American Red Cross – Northwest Louisiana Chapter, Shreveport, LA
Standard First Aid Instructor
Community Cardio Pulmonary Resuscitation (CPR) Instructor
Basic Aid Training (BAT) Instructor
Water Safety Instructor (WSI)
Lifeguard Training Instructor (LGTI)
Basic Life Support (BLS): CPR for the Professional Rescuer
Instructor Trainer Certifications (Water Safety IT and Lifeguard Training IT)
1984 – 1990

Lifeguard and Lifeguard Supervisor
Swim Instructor
Barksdale Air Force Base, LA
1984 – 1990
Lifeguard and Lifeguard Supervisor
Swim Instructor
Louisiana State University in Shreveport, Shreveport, LA

**PROFESSIONAL RECOGNITION**

2016
*New Leader Award – Webster Parish 4 – H*
Special Education 4 – H & 4 – H Clover Club, Webster Junior High, Minden, La
*Spirit Award – Webster Parish 4 – H*
Special Education 4 – H Clover Club, Webster Junior High, Minden, LA
*Community Service Club Award*
Special Education 4 – H, Webster Junior High, Minden, LA
2009
*LSUS Faculty of the Semester Award*
Kinesiology and Health Sciences Student Club, Louisiana State University in Shreveport, Shreveport, LA
2006
*Outstanding Teaching Faculty Award*
Department of Health and Exercise Sciences, Louisiana Tech University, Ruston, LA
2004
*Departmental Service and Leadership Award*
Department of Health and Exercise Sciences, Louisiana Tech University, Ruston, LA
2002
*Outstanding Young Scholar*
Department of Kinesiology, Texas Woman's University, Denton, TX
2000
*AAHPERD Adapted Physical Activity Council Student Recognition Award*
American Association of Active Lifestyles
American Alliance of Health Physical Education, Recreation, and Dance, Reston, VA
*Who's Who Among Students in American Universities and Colleges*
Texas Woman's University, Denton, TX
1995
*Teacher of the Year*
Bossier Life Skills Center, Bossier Parish Schools, Bossier City, LA
*Ten Year Volunteer Service Award*
Northwest Louisiana Chapter of the American Red Cross, Shreveport, LA
1988
*Health and Physical Education Department Student Service Award*
Louisiana State University in Shreveport, Shreveport, LA
1987
*Lifeguarding Service Award*
Barksdale Air Force Base, Bossier City, LA

**GRANTSMANSHIP**

<u>2020</u>
O'Connor, J., Carter, T., & Hanna, S. (2020, Spring). Cameroon Education Impact Project (CEIP). Spencer Foundation.
$49,618.00. NOT Funded.
<u>2018</u>

Cabell, L., O'Connor, J., Waller, M., Kraft, G., Kelly, P., & Pederson, R. (2018, Spring). *The Effect of Active Learning Strategies on Perceptions of Technology Use and Perceptions of Learning Environment*. Steelcase Education Active Learning Center Grant. $67,000.00. (NOT Funded)

Pederson, R., & O'Connor, J. (2018, Spring). *Use of iPads to Monitor Student Teacher Progress in Physical Education Settings*. Arkansas Tech University iPad Initiative. $4,500.00. Funded.

2017

O'Connor, J., & Pederson, R. (2017). *An iPad based Application of the Pedagogical Practice Improvement Model to Student Teaching*. Spencer Foundation. $49,888.00. Not funded.

Pederson, R., & O'Connor, J. (2017, Spring). *Use of iPads to Monitor Student Teacher Progress in Physical Education Settings*. Arkansas Tech University iPad Initiative. $3,000.00. Funded.

O'Connor, J., & Pederson, R. (2017, Fall). *Use of iPads to Monitor Student Teacher Progress in Physical Education Settings, Part II*. Arkansas Tech University iPad Initiative. $5,400.00. Funded.

2016

Mayfield, A., & O'Connor, J. (2016). *Promoting social skills and interactions through inclusion in a middle school concert band*. KTBS 3 One Classroom at a Time Grant. $999.96. Funded.

O'Connor, J. (2016, Fall) *Use of iPads to Promote Physical Activity for Special Populations (PE 4103): Modification of a Course to Accommodate the Use of iPad Based Pedagogy*. Arkansas Tech University iPad Initiative. $6,000.00. Funded.

2011

Savell, L., Rogers, J., Spiva, R., Amidon, D., & O'Connor, J. (2011, April). *Wiggle While You Work: A Grant to Support the Kinesthetic Learner in Elementary School Classrooms*. Bossier Parish Schools Academic Incentive Grant. $972.41. Funded.

2008

O'Connor, J. (2008, October). *A Grant to Support Faculty Training as a NASPE Initial Program Reviewer*. LSUS Faculty Development Grant. $500.00. Funded.

O'Connor, J., Longin, J., Bricker, D., & Dolezal, S. (2008, April). *A Model for Infusing Indian Education for All into a Teacher Education Curriculum*. $16,000.00. Funded.

2005

O'Connor, J., & Reeves, C.S. (2005, May). *Use of Water Weights and Ratings of Perceived Exertion (RPE) During Senior Adult Water Exercise*. Louisiana Tech University College of Education Summer Research grant. $500.00. Funded.

O'Connor, J. *Grant Reviewer, Carol M. White Physical Education Program Grant Program*. $700.00 stipend.

2004

O'Connor, J. *Grant Reviewer, Carol M. White Physical Education Program Grant Program*. $700.00 stipend.

2001

Cluphf, D., O'Connor, J., & Butki, B. (2001). *Developing Technology Applications in the SIUE Kinesiology and Health Education Department*. $17,000.00. Funded.

O'Connor, J. *Teaching Nontraditional Physical Activities to Physical Education Majors in Teacher Preparation Programs*. SIUE New Faculty Grant. $3,000.00. Funded.

Rees, K., O'Connor, J., & Cluphf, D. *Use of Handheld Computers to Monitor Behavior in Children and Youth with Disabilities*. SIUE College of Education Grant. $2,000.00. Funded.

**PUBLICATIONS**

1996

O'Connor, J., & Clark, G. (1996). Modification and motivation for fun in fitness: Helping the adapted physical educator utilize homemade equipment for fitness programming. *LAHPERD Journal, 60*(1), 7-10.

1997

O'Connor, J., & McCuller, S. (1997). Training paraprofessionals to work in an inclusive physical education setting. *LAHPERD Journal, 61*(1), 9-12.

1998

O'Connor, J., Babcock, G., & French, R. (1998). Assessment of paraprofessionals' attitudes towards inclusion in physical education [Abstract]. In D. Beaver (Ed.), *Proceedings of Achieving a Balance: The Sixth National Conference on Adapted Physical Activity* (p. 111). Macomb, IL: Western Illinois University.

O'Connor, J., & French, R. (1998). Paraprofessionals' attitudes toward inclusion in physical education. *Perceptual and Motor Skills, 86*, 98.

1999

Huettig, C., O'Connor, J., Shapland, C., & Goff, D. (1999). Pervasive developmental disorder and physical activity: Analysis of the effect of aquatics and motor programs on behavior [Abstract]. In *Proceedings of the International Federation of Adapted Physical Activit*y. Barcelonna, Spain.

Huettig, C. & O'Connor, J. (1999). Wellness programming for young children with disabilities. *Teaching Exceptional Children, 31*(3), 12 – 19.

O'Connor, J. (1999). Media Review: *School Based Home Developmental Physical Education Program*, by B.L. Wood. *Adapted Physical Activity Quarterly, 16*(1), 96-97.

O'Connor, J. (1999). Games for children of all abilities – It's MAGIC. *Adapted Physical Activity Quarterly, 16*(4), 432.

O'Connor, J. (1999). Transition and leisure. *Adapted Physical Activity Quarterly, 16*(4), 432.

Sherrill, C., & O'Connor, J. (1999). Guidelines for improving adapted physical activity research. *Adapted Physical Activity Quarterly, 16*(1), 1-8.

2000

Hackney, K., French, R., & O'Connor, J. (2000). Perception and knowledge of inclusion of students with disabilities by elementary physical educators [Abstract]. *Research Quarterly for Exercise and Sport, 71*(1), A106-A107.

O'Connor, J. (2000). Good teaching practices are at the root of managing student behavior. *Adapted Physical Activity Quarterly, 17*(4), 471.

O'Connor, J., French, R., & Henderson, H. (2000). Use of physical activity to improve behavior of young children with autism: Two for one. *Palaestra, 16*(3), 22-29.

2001

Cluphf, D., O'Connor, J., & Vannon, V. (2001). Effects of aerobic dance on the cardiovascular endurance of adults with intellectual disabilities. *Adapted Physical Activity Quarterly, 18*(1), 60-72.

O'Connor, J., French, R., & Sherrill, C. (2001). Bibliometric analysis of pedagogy literature in adapted physical activity. *Adapted Physical Activity Quarterly, 18*(4), 434-450.

O'Connor, J., Sherrill, C., & French, R. (2001). An analysis of database productivity for pedagogy literature in adapted physical activity. *Perceptual and Motor Skills, 92*, 937-940.

Smith, J., Cluphf, D., & O'Connor, J. (2001). Homework in physical education: A pilot study. *Perceptual and Motor Skills, 92*, 133-136.

Trocki, P., French, R., & O'Connor, J. (2001). Influence of reinforcers on a 1-mile walk/run by males with ADHD. *Perceptual and Motor Skills, 93*, 461-464.

2002

Lox, C. L., O'Connor., J., Woodford, R., Jackson, S. (2002). The influence of mode and intensity on exercise-induced affect [Abstract]. *Journal of Sport and Exercise Psychology, 24*, S92.

2003

Driver, S., & O'Connor, J. (2003). Exercise participation, self-esteem, and affective experiences of people with a brain injury. *Journal of Cognitive Rehabilitation, 21*(4), 26-33.

Driver, S., Lox, C., O'Connor, J., & Rees, K. (2003). Effect of an aquatic exercise program on the psycho/social experiences of individuals with brain injuries: A pilot study. *The Journal of Cognitive Rehabilitation, 21*(1), 22-31.

Reid, G., & O'Connor, J. (2003). The autism spectrum disorders: Activity selection, assessment, and program organization. *Palaestra, 19*(1), 20 – 27, 58.

Reid, G., O'Connor, J., & Lloyd, M. (2003). The autism spectrum disorders: Physical activity programming. *Palaestra, 19*(2), 20 – 26.

2004

Driver, S., O'Connor, J., Lox, C., & Rees, K. (2004). Evaluation of an aquatics program on fitness parameters of people with a brain injury. *Brain Injury, 18*(9), 847-859.

LaBorde, C., Clark, G., O'Connor, J., & Honea, K. (2004). A comparison of five anthropometric measures in determining body composition of older adults (Age 60+). *LAHPERD Journal, 68*(1), 11- 14.

Willis, D., O'Connor, J., Wyatt, F., & Heimdal, J. (2004). Relationship between exercise and depression in active and non-active registered nurses (abstract). In *Medicine and Science in Sports and Exercise, 36*(5).

2005

Clark, G., O'Connor, J., Boyd, R., Reeves, C.S., & Lox, C. (2005). Psychological benefits of exercise across modes of activity for elderly participants. In *Proceedings of the 3rd Annual Conference on Girls and Women in Physical Activity and Sport*. Shreveport, LA.

2006

Coyne, B., & O'Connor, J. (2006). Body mass index in Lincoln Parish Schools [Abstract]. In *Proceedings of the 4th Annual Conference on Girls and Women in Physical Activity and Sport*. Shreveport, LA.

Driver, S., Rees, K., O'Connor, J., & Lox, C. (2006). Effect of an aquatics program on health-promoting self-care behaviors of individuals with a brain injury. *Brain Injury, 20*(2), 133-141.

Friedmann, A., Covington, K., & O'Connor, J. (2006). The impact of activities to promote ankle stability in individuals with Ehler's-Danlos Syndrome (abstract). In *Medicine and Science in Sports and Exercise*.

Reeves, C.S., & O'Connor, J. (2006). Effect of using hand weights by exercising senior women. In *Proceedings of the 4th Annual Conference on Girls and Women in Physical Activity and Sport*. Shreveport, LA.

2013

O'Connor, J. (2013). Effect of humpback whale song and other music on select behaviors of a youth with autism spectrum disorder (abstract). *LAHPERD Journal, 76*(2), 15.

2014

O'Connor, J., & Dieringer, S.T. (2014). Effect of Humpback Whale Sounds, Didgeridoo, and Music on Select Behaviors of a Youth with Autism Spectrum Disorder: Research Application. *Palaestra, 28* (1), 10 – 13.

O'Connor, J., & Moore, M. (2014). *ASD DSM APE IEP… SOS*. Proceedings of the 2014 Louisiana Association for Health Physical Education, Recreation, and Dance State Conference, Baton Rouge, LA.

2015

O'Connor, J., & Moore, M. (2015). *Everyone Can: A Tool for Teaching, Assessing, Managing Data, and Meeting Expectations*. Proceedings of the 2014 Louisiana Association for Health Physical Education, Recreation, and Dance State Conference, Baton Rouge, LA.

2019

Kelly, P., O'Connor, J., & Pederson, R. (2019). Beyond talking the talk: How fit are Health and Physical Education majors? *International Journal of Innovative Research and Knowledge, 4*(5), 15 – 23.

2020

O'Connor, J., & Carter, T. (2020). Teacher Education for Cameroon Educators: Exploring the Possibilities. *ArATE Journal*, 10(1), 39-46.

O'Connor, J., Kelly, P., Pederson, R., & O'Connor, M. (2020). PE student teachers and technology: Perceptions of readiness. *ArATE Electronic Journal, 10*(2), 18-25.

2021

O'Connor, M., & O'Connor, J. (In review). Exercising Your Mind: Destination Imagination in the PE Class. *ArATE Electronic Journal.*

**In progress**

O'Connor, J. (In progress). There and Back Again: Cameroon, APE, Questions and Answers.

O'Connor, J. (In progress). Games, Therapy, Education, Fun: Everyone Can. *ArkAHPERD Journal*.

O'Connor, J., & Kraft, G. (In progress). Body mass index in North Central Louisiana.

O'Connor, J., & O'Connor, M. (In progress) Cardboard Zoos: Digitally Combined Movement and Academics.

O'Connor, J., & O'Connor, M. (In Progress). Rock, Paper, Scissors, Harry Potter: Quidditch and More.

**ADVOCACY**

CBS Evening News (Retreived: 28 September 2015). Swimming helps autistic teen – Videos – CBS News: http://www.cbsnews.com/videos/swimming-helps-autistic-teen 25 July 2015.

New York Times (Retrieved: 2015). A can do approach to autistic children and athletics. The New York Times, 2006. Anahad O'Connor. http://www.nytimes.com/2006/08/03/fashion/03Fitness.html?.

**MANUALS AND RESOURCES**

**Adapted Physical Education**

O'Connor, J. (2012). *A Physical Educator's Guide To Physical Activity For Children And Youth With Autism Spectrum Disorder*. Bossier City, LA: Bossier Parish Schools.

O'Connor, J. (2014). *Autism Spectrum Disorders in the DSM 5: Notes and Summary*. Bossier City, LA.

Stearn, D., & O'Connor, J. (1997). *Adapted Physical Educators Resource Guide for Support Personnel in the Least Restrictive Environment*. Denton Independent School District.

**Special Education**

Curriculum Materials (e.g., Unit Plan, Lesson Plans, Lecture Notes, Quizzes, Assessments, Learning Activities, Readings, Content Resources)

*Self – Determination Teacher Manual*. Program for Successful Employment, Division of Behavioral Sciences and College Transition Program. Bossier Parish Community College, Bossier City, LA.

*Customer Service Teacher Manual*. Program for Successful Employment, Division of Behavioral Sciences and College Transition Program. Bossier Parish Community College, Bossier City, LA.

*Workplace Safety*. Program for Successful Employment, Division of Behavioral Sciences and College Transition Program. Bossier Parish Community College, Bossier City, LA.

*College Basics Teacher Manual*. Program for Successful Employment, Division of Behavioral Sciences and College Transition Program. Bossier Parish Community College, Bossier City, LA.

*Self – Advocacy Teacher Manual*. Program for Successful Employment, Division of Behavioral Sciences and College Transition Program. Bossier Parish Community College, Bossier City, LA.

**WORKSHOPS CONDUCTED**

O'Connor, J. (2012, August). *Managing Data for the APE or PE Teacher: An ACCESS Application*. A workshop for Adapted Physical Education Teachers. Bossier Parish Schools, Bossier City, LA.
Workshop consisted of demonstration and practice using a database developed to facilitate data collection for adapted physical education teachers. (12 participants)

O'Connor, J., & Kelly, P. (2019, August). *Adapted Physical Education Programming for a Charter School for Individuals with Intellectual Disabilities*. A workshop for the ACCESS Group, Inc., Little Rock, AR.
Workshop consisted of presentation, discussion, demonstration, and practice of principles and activities appropriate to promotion of physical activity and physical education across the lifespan for individuals with intellectual disabilities, autism spectrum disorder, or learning disabilities. (25 participants)

O'Connor, M., Chacon, W., O'Connor, J. (2019, November). *Robots, Computer Programming, and Learning: A Fourth Grade Introduction*. A workshop for University of the Ozarks, Clarksville, AR.
Workshop consisted of oral presentation about the future of computer programming and robotics. The presentation was followed by hands-on activities for fourth grade students including: maneuvering robots, robot design, logical thinking, teamwork, and creative thinking. (200 participants)

O'Connor, J., & Kelly, P. (2019, November). *There is Nothing Sacred about the Game: An Adapted Physical Education Introduction*. A workshop for RP3013 Inclusive Recreation, ATU, Russellville, AR.
Workshop consisted of concepts, games, and activities related to adaptations and modifications appropriate for individuals with a variety of disabilities and a variety of levels of impairment. Participants were exposed to group, team, and individual activities that promoted physical activity, learning, fitness, and skill development. (24 participants)

O'Connor, J. (2019, December). *Cameroon Education Impact Project (CEIP) Pedagogy and Classroom Management Workshop*. 30 November – 6 December 2019. **Douala, Cameroon, Africa**.
Workshop involved observing teachers during instruction, providing feedback about pedagogy and classroom management, interviewing teachers, paraprofessionals, administrators, and parents about perceived student needs, conducting observations of students with and without in classrooms and unstructured settings to determine social interaction, communication skills, adequacy of self-help skills, and quality of motor skills. (88 participants)

**PRESENTATIONS**

1997

O'Connor, J., & Babcock, G. (1997, April). *The effects of two different amounts of fitness programming on individuals with mental and physical disabilities.* Poster session presented at the Fifth National Conference on Adapted Physical Activity, Western Illinois University, Macomb, IL.

1998

Babcock, G., O'Connor, J., Clark, G., & French, R. (1998, February). *Assessment of graduate and undergraduate physical education students toward inclusion of students with disabilities in physical education*. Poster session presented at the Southern District of the American Alliance for Health, Physical Education, Recreation and Dance Conference, Biloxi, MS. REFEREED

O'Connor, J. et al., (1998, October). *A factor analysis of the Physical Educators Inclusion Attitudes Questionnaire with physical educators in Texas*. Poster session presented at the North American Federation of Adapted Physical Activity, Minneapolis, MN. REFEREED

O'Connor, J., Babcock, G., & French, R. (1998, March). *Assessment of paraprofessionals' attitude toward inclusion in physical education*. Poster session at the Sixth National Conference on Adapted Physical Activity, Western Illinois University, Macomb, IL.

O'Connor, J, & Sherrill, C. (1998, October). *A documentary analysis of the research designs and statistical analysis of Adapted Physical Activity Quarterly*. Paper presented at the North American Federation of Adapted Physical Activity, Minneapolis, MN. REFEREED

1999

Babcock, G., O'Connor, J., & Rocco, S. (1999, February). *Physical education assessment for all*. Paper presented at the Southern District of the American Alliance for Health, Physical Education, Recreation and Dance Conference, Biloxi, MS. REFEREED

French, R., Berrends, K., & O'Connor, J. (1999, September). *Attitudes and knowledge of regular physical educators in a modified distance learning-based behavior management/pedagogy in an APE class*. Poster session presented at the Learning in the 21st Century: Challenges for Personnel Preparation in Special Education - OSEP Personnel Training Conference, Washington, DC.

Huettig, C., O'Connor, J., Shapland, C., & Goff, D. (1999, April). *Pervasive developmental disorder and physical activity: Analysis of the effect of aquatics and motor programs on behavior*. Poster session presented at the International Federation of Adapted Physical Activity, Barcelona, Spain. REFEREED

O'Connor, J. (1999, November). *Disability information: Quick access on the web*. Paper presented at Illinois Association for Health, Physical Education, Recreation and Dance State Convention, Arlington Heights, IL. REFEREED

O'Connor, J., & Babcock, G. (1999, February). *The use of technology in the presentation of physical education lessons*. Paper presented at the Southern District of the American Alliance for Health, Physical Education, Recreation and Dance Conference, Greensboro, NC. REFEREED

2000

Buswell, D., Sherrill, C., & O'Connor, J. (2000, November). *Article properties of Adapted Physical Adapted Quarterly: 1984-2000*. Poster session presented at the North American Federation of Adapted Physical Activity, New Orleans, Louisiana. REFEREED

Cluphf, D., Rees, K., & O'Connor, J. (2000, October). *Technology and the Internet: Information for physical educators*. Madison County Educators Conference, Edwardsville, IL.

O'Connor, J. (2000, November). *The methodology of bibliometrics in adapted physical activity literature*. Paper presented at the North American Federation of Adapted Physical Activity, New Orleans, LA. REFEREED

Trocki, P., French, R., & O'Connor, J. (2000, November). *Influence of reinforcers on a 1-mile walk/run by males with ADHD*. Paper presented at the North American Federation of Adapted Physical Activity, New Orleans, LA. REFEREED

Vogler, E. W., Kudlacek, M., O'Connor, J., & Wiseman, R. (2000, November). *Synthesis review of pedagogical research in physical education for students with disability*. North American Federation of Adapted Physical Activity Symposium. New Orleans, LA. REFEREED

2001

Babcock, G., & O'Connor, J. (2001, June). *Bibliometrics: Determining the extent and location of the knowledge base in adapted physical activity*. Paper presented at the International Federation of Adapted Physical Activity, Vienna, Austria. REFEREED

Eder, D., Santanello, C., Smith, R., & O'Connor, J. (2001, June). *Survivor! How the use of assessment and the G.I.F.T. can help you stay on the promotion, merit, and tenure island*. Paper presented at the AAHE Assessment Conference, Denver, CO. REFEREED

2002

O'Connor, J., Lox, C., & Rees, K. (2002, May). *Stimulating critical thinking regarding fitness for individuals with disabilities and special populations: The computer revolution.* Paper presented at the Pacific Planning, Assessment & Institutional Research Conference, Honolulu, HI. REFEREED

Driver, S., O'Connor, J., Lox, C., & Rees, K. (2002, October). *The effect of an aquatic exercise program on psychosocial parameters of individuals with an acquired brain injury*. Poster presented at the Bi-annual meeting of the North American Federation of Adapted Physical Activity. Oregon State University. REFEREED

Driver, S., O'Connor, J., Lox, C., & Rees, K. (2002, November). *The effect of exercise on physical fitness, psychosocial experiences, and health awareness of people with brain injuries*. Symposium conducted at the annual meeting of the Virginia Alliance of Health, Physical Education, Recreation, and Dance, Richmond, VA.

2003

Driver, S., & O'Connor, J. (2003, November). *Self-esteem and affective experiences after exercise in people with a brain injury*. Paper presented at the Slaughter Research Symposium at the University of Virginia, Charlottesville, VA.

Driver, S., O'Connor, J., Lox, C., & Rees, K. (2003). *Evaluation of an aquatics program on fitness parameters of people with a brain injury*. Paper presented at the International Symposium of Adapted Physical Activity, Seoul, Korea. REFEREED

Driver, S., Rees, K., O'Connor, J., & Lox, C. (2003). *Effect of an aquatics program on health-promoting self-care behaviors of individuals with a brain injury*. Paper presented at the International Symposium of Adapted Physical Activity, Seoul, Korea. REFEREED

2004

Clark, G., Reeves, S., Boyd, R., Driver, S., O'Connor, J., & Lox, C. (2004, May). *Comparison of psychological responses between men and women engaged in aquatic exercises*. Paper presented at the National Conference of The American Association of Health, Physical Education, Recreation and Dance, New Orleans, LA. REFEREED

Clark, G., O'Connor, J., & Heimdal, J. (2004, May). *Accuracy of exercise intensity assessment by senior citizens during 3 modes of exercise*. Paper presented at the National Conference of the American Alliance for Health, Physical education, Recreation, and Dance, New Orleans, LA. REFEREED

LaBorde, C., Clark, G., & O'Connor, J. (2004, April). *A Comparison of five anthropometric measures in determining body composition of older adults (Age 60 +)*. Paper presented at the National Conference of the American Alliance for Health, Physical Education, Recreation, and Dance, New Orleans, LA. REFEREED

O'Connor, J. (2004, February). *HPE: Creating a coordinated HPE program*. Professional Development Day for Claiborne Parish Schools, Homer, LA.

O'Connor, J. (2004, April). *Physical activity and exercise for senior citizens*. Trinity Methodist Church, Don't Mention Age Group, Ruston, LA.

Rees, K., Lox, C., & O'Connor, J. (2004, Feburary). *The benefits of exercise and its effects on health promoting behaviors during pregnancy.* Poster session at the American Academy of Health Behavior. REFEREED

Willis, D., O'Connor, J., Wyatt, F., & Heimdal, J. (2004, June). *Relationship between exercise and depression in active and non-active registered nurses.* Paper presented at the 51st Annual Meeting of the American College of Sports Medicine, Indianapolis, IN. REFEREED

2005

Clark, G., Reeves, S., O'Connor, J., & Lox, C. (2005, April). *The effect of different modes of exercise on psychological measures in elderly participants*. Paper presented at the National Conference of The American Association of Health, Physical Education, Recreation and Dance, Chicago, IL. REFEREED

Clark, G., Reeves, S., O'Connor, J., & Lox, C. (2005, February). *The effect of different modes of exercise on psychological measures in female elderly participants*. Paper presented at the National Conference of 3rd Annual National Conference on Girls' and Women's Health, Physical Activity and Sport, Shreveport, LA. REFEREED

Cunningham, G. M., LaBorde, C. C., O'Connor, J., & Heimdal, J. E. (2005, April). *Relationship between mood states, personality type, and performance in elite junior American powerlifters*. Paper presented at the National

Conference of the American Alliance for Health, Physical education, Recreation, and Dance, Chicago, IL. REFEREED

Kimbell-Lopez, K., Vessel, A., O'Connor, J., Porter-Lord, D., & Thomas, L. (2005, March). *Model technology classrooms: Navigating the digital edge*. Paper presented at the Society for Information Technology and Teacher Education Annual Conference, Phoenix, AZ.

Lovell, T., O'Connor, J., Wyatt, F., & Heimdal, J. (2005, January). *The effects of exercise duration on depression of at risk adolescents.* Paper presented at Southeast American College of Sports Medicine Conference, Charlotte, NC. REFEREED

McIntyre, H., O'Connor, J., & Sayger, T. (2005, November). *Gender differences in the effect of exercise on positive affect and negative affect in older adults.* First place award for outstanding graduate student presentation. Tennessee State Psychological Association, 2005 Conference: Nashville, TN. REFEREED

O'Connor, J. (2005, February). *HPE: Grant writing to fund your HPE program*. Professional Development Day for Claiborne Parish Schools, Homer, LA.

2006

Coyne, B., & O'Connor, J. (2006, February). *Body mass index for students in Lincoln Parish Schools*. Paper presented at the 4th Annual National Conference on Girls' and Women's Health, Physical Activity and Sport, Shreveport, LA.

Friedmann, A., Covington, K., & O'Connor, J. (2006). The effects of exercise programming on joint stability of individuals with Ehlers-Danlos syndrome. Paper presented at the National ACSM Conference, Denver, CO. REFEREED

Reeves, S., Crosby, A., & O'Connor, J. (November, 2006). *The effect of webbed gloves during aquatic exercise to improve muscular strength in senior adults*. Poster session at the Louisiana Association for Health, Physical Education, Recreation, and Dance Annual Conference, Baton Rouge, LA.

Reeves, S., O'Connor, J., Willshire, A., & Heimdal, T. (2006, February). *The effect of water dumbbells on ratings of perceived exertion in elderly females in an aquatic exercise program.* Paper presented at the National Conference of 4th Annual National Conference on Girls' and Women's Health, Physical Activity and Sport, Shreveport, LA.

2007

Boyd, R., & O'Connor, J. (2007, February). *Effect of dynamic balance training on static balance in senior adults*. Paper presented at the Fifth Annual National Conference on Girls' and Women's Health, Physical Activity and Sport, Shreveport, LA.

O'Connor, J., Bricker, D., & Dolezal, S. (2007, April). *Physical activity programming for children and youth with autism spectrum disorders: Implications for classroom teachers*. Paper presented at the Montana Council for Exceptional Children, Billings, MT. REFEREED

2012

O'Connor, J. (2012, June). *Effect of Humpback Whale Songs, Didgeridoo, Tuba, Pink Floyd, and "Old Man River" on Select Behaviors of a Blind Youth with Autism Spectrum Disorder*. Research paper presented to the Special Education Department, Bossier Parish Schools, Bossier City, LA.

O'Connor, J. (2012, October). *Adapted Physical Education Services: Information for Parents and Caregiver.* Northwest Louisiana Chapter of the Autism Society at Willis Knighton Pieremont Hospital, Shreveport, LA.

O'Connor, J. (2012, November). *Effect of Humpback Whale Songs and Other Music on Select Behaviors of a Youth with Autism Spectrum Disorder*. Research paper presented at the Louisiana Association for Health, Physical Education, Recreation and Dance State Conference. Baton Rouge, LA.

O'Connor, J. (2012, November). *Managing Data for the APE or PE Teacher: An Microsoft Access Application.* Paper presented at the Louisiana Association for Health, Physical Education, Recreation and Dance State Conference, Baton Rouge, LA.

2014

O'Connor, J. (2014). *Autism Spectrum Disorders and Pedagogy: An Informational Lecture Series for Education Students*. Presentations in Educational Psychology and Adolescent Psychology courses at Bossier Parish Community College, Bossier City, LA.

O'Connor, J., & Moore, M. (2014, November). *ASD DSM APE IEP… SOS*. Paper presented at Louisiana Association for Health Physical Education, Recreation, and Dance State Conference, Baton Rouge, LA.

2015

O'Connor, J., & Moore, M. (2015, November). *Everyone Can: A Tool for Teaching, Assessing, Managing Data, and Meeting Expectations*. Paper presented at Louisiana Association for Health Physical Education, Recreation, and Dance State Conference, Baton Rouge, LA.

2016

O'Connor, J., Pederson, R., & Kraft, G. (2016, November). *An Analysis of BMI in Elementary School Children in North Louisiana*. Paper Presented at Arkansas Association for Health Physical Education, Recreation, and Dance State Conference, Little Rock, AR.

O'Connor, J., Kelly, P., & O'Connor, M. (2016, October). *Destination Imagination: Creativity, Social Skills, Planning, Academic Skills, and P.E.?* Paper Presented at Arkansas Association of Teacher Educators, Russellville, AR.

O'Connor, J., Kelly, P., & O'Connor, M. (2016, November). *Exercising Your Mind: Destination Imagination in the PE Class*. Paper Presented at Arkansas Association for Health Physical Education, Recreation, and Dance State Conference, Little Rock, AR.

O'Connor, J., & Kelly, P. (2016, November). *Everyone Can IF you have the Right Tools*. Paper Presented at Arkansas Association for Health Physical Education, Recreation, and Dance State Conference, Little Rock, AR.

Pederson, R., & O'Connor, J. (2016, November). *Using Experiential Principles to Create Community*. Paper Presented at Arkansas Association for Health Physical Education, Recreation, and Dance State Conference, Little Rock, AR.

2017

O'Connor, J., & Kelly, P. (2017, March). *Introduction to Sitting Volleyball: A Workshop for ATU Delta Sigma Omicron*. Disability Sport Workshop at Arkansas Tech University: An Invited Presentation, Russellville, AR.

Kelly, P., Pederson, R., O'Connor, J., Barbay, B., Morrison, G., Rhea, E., Ayers, C., Bullard, A., Eggleton, T., & Post, M. (2017, April). *An Introduction to Sitting Volleyball and Tchoukball for Individuals with Disabilities*. Paper presented at the Arkansas Therapeutic Recreation Society Spring Workshop, Russellville, AR.

O'Connor, J. (2017, October). *Teaching Art in a Color-Blind World – Lessons for a Severe Profound Class.* Paper Presented at Arkansas Council for Exceptional Children, Little Rock, AR.

O'Connor, J., Pederson, R., & Kelly, P. (2017, October). *Games, therapy, Education, Fun: Everyone Can.* Paper Presented at Arkansas Council for Exceptional Children, Little Rock, AR.

Ayres, O'Connor, J., & Pederson, R. (2017, November). *Examples of Technology Applications for Viewing Student Skill Development.* Paper Presented at Arkansas Association for Health Physical Education, Recreation, and Dance State Conference, Little Rock, AR.

Kelly, P., O'Connor, J., & Pederson, R. (2017, November). *Generation iY: Secrets to Connecting with Today's Teens and Young Adults in the Digital Age*. Paper Presented at Arkansas Association for Health Physical Education, Recreation, and Dance State Conference, Little Rock, AR.

Tarte, C., O'Connor, J., Kelly, P., Ayres, C., & Pederson, R. (2017, November). *Sitting Volleyball: Harder than you Think--More Fun Than You Imagine.* Paper Presented at Arkansas Association for Health Physical Education, Recreation, and Dance State Conference, Little Rock, AR.

2018

Kelly, P., Pederson, R., & O'Connor, J. (2018, November). *How FIT are our Arkansas Tech University HPE Students?* Paper Presented at Arkansas Association for Health Physical Education, Recreation, and Dance State Conference, Little Rock, AR.

O'Connor, J., Kelly, P., Waller, M., McMahan, C., & Pederson, R. (2018, October). *Certified Adaptive Recreational Sport Specialist-1*. Paper Presented at Arkansas Council for Exceptional Children, Little Rock, AR. REFEREED

O'Connor, J., Pederson, R., & Kelly, P. (2018, November). *Disability Sports Certification: CARSS-I*. Paper Presented at Arkansas Association for Health Physical Education, Recreation, and Dance State Conference, Little Rock, AR.

O'Connor, J., Kelly, P., & Pederson, R. (2018, November). *PE Student Teachers and Technology: Perceptions of Readiness*. Paper Presented at Arkansas Association for Health Physical Education, Recreation, and Dance State Conference, Little Rock, AR.

2019

O'Connor, J. (2019, March). *Adapted Physical Education: An LRE Approach to Physical Activity*. An invited presentation for the Department of Rehabilitation Services, Arkansas Children's Hospital, Little Rock, AR. **INVITED**

O'Connor, J. (2019, December). *Thinking about thinking and making mistakes: Metacognition with fourth graders.* Presentation as part of the Cameroon Education Impact Project (CEIP) Pedagogy and Classroom Management Workshop. 30 November – 6 December 2019. Douala, Cameroon, Africa. **INVITED**

O'Connor, J. (2019, December). *Least Restrictive Environment is NOT just for some.* Presentation as part of the Cameroon Education Impact Project (CEIP) Pedagogy and Classroom Management Workshop. 30 November – 6 December 2019. Douala, Cameroon, Africa. **INVITED**

O'Connor, J. (2019, December). *Autism Spectrum Disorder and other Mysteries: Not Solved but Explored.* Presentation as part of the Cameroon Education Impact Project (CEIP) Pedagogy and Classroom Management Workshop. 30 November – 6 December 2019. Douala, Cameroon, Africa. **INVITED**

O'Connor, J., Kelly, P., Myers, K., McMahan, C., & Pederson, R. (2019, July). *We Teach Unavailable Kids: An Approach to Promoting Activity, Education, Recreation, and Advocacy*. An invited presentation for the Department of Education Special Education Unit, Little Rock, AR. **INVITED**

O'Connor, J., & Kelly, P. (2019, August). *Adapted Physical Education: The Audacity of Play*. An invited presentation for the Department of Counselling Services, Arkansas Children's Hospital, Little Rock, AR. **INVITED**

O'Connor, J., Kelly, P., Myers, K., McMahan, C., Jackson, S., & Pederson, R. (2019, September). *The Audacity of PLAY: **P**hysical education and **L**eisure **A**ctivities for **Y**outh*. Session 1. An invited presentation for the Arkansas Department of Education Special Education LEA Academy, Hot Springs, AR. **INVITED**

O'Connor, J., Kelly, P., Myers, K., McMahan, C., Jackson, S., & Pederson, R. (2019, September). *The Audacity of PLAY: **P**hysical education and **L**eisure **A**ctivities for **Y**outh*. Session 2. An invited presentation for the Arkansas Department of Education Special Education LEA Academy, Hot Springs, AR. **INVITED**

<u>2020</u>

O'Connor, J. (2020, November). *Cameroon Education Impact Project (CEIP) Workshop*. Paper presented at the 49th National Adapted Physical Education Conference, California Association for Health, Physical Education, Recreation and Dance, State Council on Adapted Physical Education, Online Conference, San Jose State University, California. REFEREED

**Appendix C – 2019-2020 Assessment Report**

Arkansas Tech University

# SCS Assessment 2019-2020

Most of the program objectives were met. Those that were partially met this year were likely impacted by COVID-19 and the transition to online teaching for classes that are intended to be hands-on.

**February 18, 2021**

# Table of Contents

SCS Assessment 2019-2020

# Major-ED-PE-Strength and Conditioning (MS) 2019 - 2020

Completed

**1** GOALS **3** OUTCOMES **10** MEASURES **10** TARGETS **10** FINDINGS **1** ATTACHMENTS

Institutional Mission

Arkansas Tech University is dedicated to student success, access, and excellence as a responsive campus community providing opportunities for progressive intellectual development and civic engagement. Embracing and expanding upon its technological traditions, Tech inspires and empowers members of the community to achieve their goals while striving for the betterment of Arkansas, the nation, and the world.

Program Mission

1 **Academic Year**
2019-2020
Program director had injury and surgery. Program reveiw has been moved to coming year.

1.1 **Program Learning Outcomes**
Scientific knowledge
Students will demonstrate the necessary scientific knowledge to be effective strength coaches.

## Action Plan

Things to accomplish in 2019-20

| Budget Source | Amount | Due | Status |
|---|---|---|---|
| | $0.00 | no due date set | |

| Action Item 1 | Created | Due | Status |
|---|---|---|---|
| Develop a rubric for Lab Report (PE 6033) | 3/10/2020 | 6/30/2020 | In Progress |

| Action Item 2 | Created | Due | Status |
|---|---|---|---|
| Develop a rubric for Final Presentation (PE 6083) | 3/10/2020 | 6/30/2020 | In Progress |

| Action Item 3 | Created | Due | Status |
|---|---|---|---|
| | 6/23/2020 | | |

1.1.1 **Measures**

Diet Analysis Assignment (SCS 6063)

Diet analysis assignment completed midway during the semester in SCS 6063 Trends in Sports Nutrition and Metabolism.

METHODOLOGY*

This will be assessed during the fall semester.

SOURCE OF EVIDENCE

1.1.1.1 **Expectations/Target for this Outcome**

80% or better Not Met

| | |
|---|---|
| EXPECTATIONS/TARGET FOR THIS OUTCOME | All students will obtain 80% or better on this assignment. |
| FINDINGS/RESULTS | Three of the five students earned 90% or higher. However, 2 students were below 80% (74% and 68.5%). |
| REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS | Better clarification of the assignment in the syllabus and in class may be necessary in order for all students to meet the expectations. The syllabus contains all of the important details, but may not emphasize them enough for all students to realize the importance of all aspects of the assignment.<br><br>Another challenge is the diet analysis tool selected by the students. Not all students chose tools that provided reports with enough detail for this graduate level assignment. Better guidance in terms of tools may be needed. |
| IMPROVEMENT TYPE | |
| IMPROVEMENT DESCRIPTION | |
| IMPROVEMENT | Syllabus description adjusted. |

1.1.2 **Measures**

Lab Report (PE 6033)

Lab report from PE 6033 Exercise Physiology. This may be completed individually or as a group.

METHODOLOGY*

This will be assessed during the spring semester.

SOURCE OF EVIDENCE

### 1.1.2.1 Expectations/Target for this Outcome

80% or better Met

EXPECTATIONS/TARGET FOR THIS OUTCOME: All students will obtain 80% or better on this assignment, regardless of whether it is completed individually or as a group.

FINDINGS/RESULTS: The average student performance was 85.6%. All students were above 80%.

REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS:

IMPROVEMENT TYPE:

IMPROVEMENT DESCRIPTION:

IMPROVEMENT:

## 1.1.3 Measures

Lab Report (PE 6053)

Lab report from PE 6053 Biomechanics.

METHODOLOGY*

This will be assessed during the fall semester.

SOURCE OF EVIDENCE

### 1.1.3.1 Expectations/Target for this Outcome

80% or better Met

EXPECTATIONS/TARGET FOR THIS OUTCOME: All students will obtain 80% or better on this assignment.

FINDINGS/RESULTS: All students performed at 80% or better.

REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS:

IMPROVEMENT TYPE:

IMPROVEMENT DESCRIPTION:

IMPROVEMENT

1.1.4 **Measures**

Assignment from PE 6043

Select an assignment from PE 6043 Motor Learning to be used for assessment.

METHODOLOGY*

This will be assessed during the spring semester.

SOURCE OF EVIDENCE

1.1.4.1 **Expectations/Target for this Outcome**

80% or better Met

EXPECTATIONS/TARGET FOR THIS OUTCOME: All students will obtain 80% or better on this assignment.

FINDINGS/RESULTS: This semester, the Culminating Project assignment was selected. No students scored below 80%. The class average was 91.2% with a range of 84-96%.

REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS

IMPROVEMENT TYPE

IMPROVEMENT DESCRIPTION

IMPROVEMENT

1.1.5 **Measures**

Final Presentation (PE 6083)

This is the final project presentation for PE 6083 Research Design and Statistics in Physical Education. This takes place at the end of the semester.

METHODOLOGY*

This will be assessed in the fall semester.

SOURCE OF EVIDENCE

1.1.5.1 **Expectations/Target for this Outcome**

80% or better Met

| | |
|---|---|
| EXPECTATIONS/TARGET FOR THIS OUTCOME | All students will obtain 80% or better on this assignment. |
| FINDINGS/RESULTS | All students scored above 90% for this assignment. |
| REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS | I do not have a presentation rubric developed. I need to develop a rubric before I teach the class the next time. |
| IMPROVEMENT TYPE | |
| IMPROVEMENT DESCRIPTION | |
| IMPROVEMENT | |

## 1.2 Program Learning Outcomes

Practical knowledge and skills

Students will demonstrate the practical knowledge & skills to be effective strength coaches.

### 1.2.1 Measures

52-week Annual S&C Planning Presentation (SCS 6033)

This is the 52-week annual S&C planning presentation for SCS 6033 Strength and Conditioning Program Design & Development.

METHODOLOGY*

This will be assessed during the spring semester.

SOURCE OF EVIDENCE

#### 1.2.1.1 Expectations/Target for this Outcome

80% or better Met

| | |
|---|---|
| EXPECTATIONS/TARGET FOR THIS OUTCOME | All students will obtain 80% or better on this assignment. |
| FINDINGS/RESULTS | The average student performance was 92.5% with a range of 90-95%.

 |
| REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS | |

IMPROVEMENT TYPE

IMPROVEMENT DESCRIPTION

IMPROVEMENT

1.2.2 **Measures**

Case Study Based Final Exam (SCS 6013)

This is a case study based final exam for SCS 6013 Measurement and Evaluation in Strength and Conditioning.

METHODOLOGY*

This will be assessed during the spring semester.

SOURCE OF EVIDENCE

1.2.2.1 **Expectations/Target for this Outcome**

80% or better Partially Met

EXPECTATIONS/TARGET FOR THIS OUTCOME: All students will obtain 80% or better on this assignment.

FINDINGS/RESULTS: The average performance was 86.1% with a range of 71.1% to 94.8%. Two students scored below the 80% mark with one at a71.1% and one at 79.3%.

REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS: I need to evaluate whether or not students were low performers because they made poor decisions on the exam or because they did not remember the details of protocols. Decision making and critical thinking will need to be addressed.

IMPROVEMENT TYPE

IMPROVEMENT DESCRIPTION

IMPROVEMENT

1.2.3 **Measures**

Programming Exam and Hands-on Coaching (SCS 6043)

This is the programming exam and hands-on coaching experience in SCS 6043 Techniques for Development of Hypertrophy, Strength & Power.

METHODOLOGY*

This will be assessed during the summer.

SOURCE OF EVIDENCE

### 1.2.3.1 Expectations/Target for this Outcome

80% or better Partially Met

EXPECTATIONS/TARGET FOR THIS OUTCOME: All students will obtain 80% or better on this assignment.

FINDINGS/RESULTS: The results of the 2 assignments are below:

Hands-on Coaching: Mean= 93; Max = 96; Min = 90
Final exam: Mean = 73; Max = 90; Min = 57 (6 below 80)




REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS: This course is usually face to face but was online due to COVID-19. This likely impacted student performance on these assignments.

IMPROVEMENT TYPE:

IMPROVEMENT DESCRIPTION:

IMPROVEMENT:

## 1.2.4 Measures

Programming Exam and Hands-on Coaching (SCS 6053)

This is the programming exam and hands-on coaching experience in SCS 6053 Techniques for Development of Speed, Agility, Reaction Time & Endurance.

METHODOLOGY*

This will be assessed during the summer.

SOURCE OF EVIDENCE

### 1.2.4.1 Expectations/Target for this Outcome

80% or better Partially Met

EXPECTATIONS/TARGET FOR THIS OUTCOME: All students will obtain 80% or better on this assignment.

FINDINGS/RESULTS: The results of the 2 assignments are below: Hands-on Coaching: Mean= 93; Max = 96; Min = 88
Final exam: Mean = 70; Max = 90; Min = 56 (7 below 80)

REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS

This course is usually face to face but was online due to COVID-19. This likely impacted student performance on these assignments.

IMPROVEMENT TYPE

IMPROVEMENT DESCRIPTION

IMPROVEMENT

## 1.3 Program Learning Outcomes

Combined

Students will demonstrate integrated scientific knowledge & practical knowledge / skills in a successful research or creative project or internship.

### 1.3.1 Measures

Final Program Project (SCS 6103)

This is the final project for the program. It is a pass/fail project and takes place in SCS 6103 Professional Project

METHODOLOGY*

This will be assessed as the course is offered (usually fall and spring semesters).

SOURCE OF EVIDENCE

#### 1.3.1.1 Expectations/Target for this Outcome

100% pass Met

EXPECTATIONS/TARGET FOR THIS OUTCOME

All students will pass the final project.

FINDINGS/RESULTS

Fall - 1 student took and passed the Professional Project class.

Spring - 5 students took and passed this class.


REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS

IMPROVEMENT TYPE

IMPROVEMENT DESCRIPTION

IMPROVEMENT

## Project Attachments (1)

| Attachments | File Size |
| --- | --- |
| SCS 6063 Diet Analysis Rubric.pdf | 402KB |

**Appendix D – Graduate Survey**

The survey is available at the link below:

https://forms.office.com/Pages/ResponsePage.aspx?id=0v-3fW3bFkS9bXHx3nmU0jcISoNGSVhEsttETOyqXxFUNlpHWVo4TlQ4ODdRTk8wRkdaVUFWOVRCUi4u

# SCS Graduate Survey

* Required

1. My name is... *

2. I am currently working as a strength and conditioning coach *

- ◯ Yes
- ◯ No

3. I am currently working at/for *

4. My place of employment is *

- ◯ University setting
- ◯ Public school setting
- ◯ Private setting

5. I am employed *

- ◯ Full-time
- ◯ Part-time

6. I graduated in *

- ◯ Spring
- ◯ Summer
- ◯ Fall

7. I graduated in *

- ◯ 2015
- ◯ 2016
- ◯ 2017
- ◯ 2018
- ◯ 2019

8. I am currently CSCS certified through the NSCA. *

- ◯ Yes
- ◯ No

9. I am currently SCCC certified through the CSCCA. *

- ◯ Yes
- ◯ No

10. I am currently USAW certified. (Select the higher level if both certifications are held.) *

- ◯ Level 1
- ◯ Level 2
- ◯ None

11. I currently hold additional certifications. (Please list with the year obtained.) *

12. Year obtained *

- ◯ 2014
- ◯ 2015
- ◯ 2016
- ◯ 2017
- ◯ 2018
- ◯ 2019

13. Year obtained *

- ○ 2014
- ○ 2015
- ○ 2016
- ○ 2017
- ○ 2018
- ○ 2019

14. Year obtained *

- ○ 2014
- ○ 2015
- ○ 2016
- ○ 2017
- ○ 2018
- ○ 2019

15. I have taken the NSCA's CSCS exam _____ times. *

- ○ None
- ○ Once
- ○ Twice
- ○ Three or more times

16. Immediately after graduation, I was employed by_____ in (city, state). *

17. My professional goals for the future include... *