



AY 2012 – 2013
Program Review

Kinesiology



**Program Review for
Bachelor of Arts in Kinesiology**

Submitted by
Dr. Jill Cordova
Head, Department of Kinesiology
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PROGRAM REVIEW

Bachelor of Arts in Kinesiology

1. Introduction and Program Overview

a. Program description by level, concentrations and minors

The B.A. Degree in Kinesiology offers the following three concentrations: adapted physical education, fitness and health promotion, and K-12 teaching. The Program also offers a minor in personal training. The National Association for Sport and Physical Education (NASPE) has accredited the K-12 teaching program, is nationally recognized by The National Council for Accreditation of Teacher Education (NCATE) and the Colorado Department of Education (CDE). Our Fitness and Health Promotion concentration is designed to align with the National Commission for Health Education Credentialing (NCHEC) guidelines.

Students concentrating in adapted physical education will learn to adapt or modify the physical education curriculum and/or instruction to address specific abilities of individuals. Students will learn to develop activities that are appropriate and effective for persons with disabilities. Career opportunities include: adapted physical education teacher (K-12), which requires completing the K-12 concentration coursework; activity director at an assisted living center or rehabilitation facility; physical therapist;* and occupational therapist.*

Students enrolled in the fitness and health promotion concentration should have a strong interest in the sciences as this program applies science to human function. The student will explore exercise physiology, anatomical kinesiology, community health, physical activity and aging, worksite health promotion and sports nutrition, among other subject areas. Career opportunities include: sports and wellness program instructors and directors; strength coaches for college, university and professional sports* programs; managers and exercise leaders in corporate wellness programs; nutritionist;* occupational therapist;* and personal trainer. (*Career requires additional post-baccalaureate studies.)

The K-12 teaching concentration prepares students to teach elementary, middle and high school physical education. The degree plan includes coursework covering human anatomy and physiology, team and individual sports, exercise science and teaching methods courses. Specifically, the teacher candidate studies and demonstrates competence in three elements of human movement education: (1) core human movement knowledge area; (2) the professional area; and (3) the pedagogical area where proficient skill development and pedagogy are stressed throughout the program. Students will gradually accumulate over 200 hours of classroom experience before beginning student teaching. Admission to the Teacher Education Program is required for all teacher candidates who are working toward licensure. A minimum cumulative GPA of 2.8 (including transfer and CMU coursework) is required for admission to the Teacher Education Program. A minimum GPA of 2.8 is required overall, in content major coursework, and in all education coursework prior to the student teaching internship.

Students enrolled in the personal training minor should have a strong interest in fitness, health promotion and personal training. Students will engage in practical experiences that will help them with the possibility of a future career in personal training. Students will explore subject areas that include: anatomy, physiology, kinesiology, applications of physical fitness and exercise physiology.

b. Brief history of the program

The Bachelor of Arts (B.A.) in Kinesiology (previously the degree was entitled Human Performance and Wellness, but was changed in 2005) was approved as an official degree in 1994 by the Colorado Commission on Higher Education. Before that, a physical education track was available in the selected studies degree program since the 1987-1988 academic years. Since becoming an official baccalaureate degree, the program has prospered and grown tremendously. We currently have over 900 majors in the Department of Kinesiology. The B.A. in Kinesiology specifically has over 400 majors. In the 2011-2012 academic year we graduated 101 persons (63 were in the B.A. Kinesiology program), our largest graduating class to date.

The B.A. in Kinesiology previously had the following five concentrations: adapted physical education; athletic training; exercise science; K-12 teaching; and sport and fitness management. In 2007 the sport and fitness management program evolved into a separate degree program: B.S. in sport management. In 2007 the athletic training program evolved into a separate degree program: B.S. in athletic training. In 2011 the exercise science program evolved into a separate degree program: B.S. in exercise science. In 2010, the fitness and health promotion concentration was created. In 2011 the B.A. continued with the following three concentrations: adapted physical education, fitness and health promotion, and K-12 teaching. The National Association for Sport and Physical Education (NASPE) has accredited the K-12 teaching program, is nationally recognized by The National Council for Accreditation of Teacher Education (NCATE) and the Colorado Department of Education (CDE).

c. Recommendations from the previous external review and progress made toward addressing them

1. The K-12 Teaching concentration should undergo a review of its requirements.

Progress: Since the last program review, we have vigorously reviewed our K-12 Teaching curriculum and requirements. We submitted a SPA report to the National Association for Sport and Physical Education (NASPE) and The National Council for Accreditation of Teacher Education (NCATE). In August 2012 the report was accepted and the program is now nationally recognized by The National Council for Accreditation of Teacher Education (NCATE).

2. The Exercise Science concentration would be a strong program if it was made an independent major in the Department of Kinesiology.

Response: In 2011 the exercise science program evolved into a separate degree program: B.S. in exercise science. In 2011 the B.A. continued with the following three concentrations: adapted physical education, fitness and health promotion, and K-12 teaching.

3. In speaking with the students, they indicated that they would like to have a Biomechanics class added to the curriculum. In reviewing the concentrations, this would make an excellent addition to all concentrations.

Response: A biomechanics course and lab course have been added to the curriculum.

4. Syllabi should all contain student outcomes/objectives.

Response: We have made a very conscious effort to make sure this is true of all our syllabi in our department.

5. The faculty is stretched too thin and is doing more with the same resources. At this point, the Department of Kinesiology cannot grow in credit hour production without additional faculty resources. I would contend that the faculty has had a difficult time developing the areas of scholarship and service with this current faculty load.

Response: Since the last program review we have added three full time positions: Clinical Coordinator for athletic training, Assistant Professor of Kinesiology, and Associate Professor of Kinesiology and the Director of the Monfort Family Human Performance Laboratory.

6. The department faculty also needs to focus on annual goals to enhance and improve the already established quality present in the department.

Response: The department has established a mission statement, program goals, and student learning outcomes.

7. With the current number of full-time faculty, it will be difficult, if not impossible, for the concentrations to grow any further. Additional full time faculty will be needed to permit further student growth. The department may need to examine its admission policies in high demand areas and determine if an admission cap will need to be placed on the concentration if additional faculty resources are not provided.

Response: Currently we have admission standards into the teacher education program and the athletic training program. We are aware that we may need to consider admission standards to our other programs.

8. Faculty development and attendance at regional and national conventions and conferences should be encouraged.

Response: We do encourage this. It is challenging with the current amount of professional development monies that are available for our faculty.

9. NCATE accreditation will pose a great challenge to the K-12 Teaching concentration. At the present time, this program has not identified its seven to eight major assessments that it will use to meet the SPA (NASPE) standards. Data for at least three years for these major assessments will need to be provided at the next SPA and NCATE review.

Response: As stated in number in August 2012 the report was accepted and the program is now nationally recognized by The National Council for Accreditation of Teacher Education (NCATE). We submitted three years of data on eight major assessments.

10. The Department of Kinesiology should balance the summative types of assessments with equivalent formative types of assessments. A systematic way for faculty to review the data from all programs needs to be established.

Response: We have done this through the efforts made with K-12 assessments, and through the use of student learning outcomes, assessment data, and curriculum maps.

11. Online resources available for distance learning students are limited and need to be expanded. This is a concern that is campus-wide and not specific to the Department of Kinesiology. However, since the Department of Kinesiology accounts for 32% of all online classes, this is a particularly relevant concern for this department.

Response: We have seen an increase in the online support for both students and faculty on campus. We do feel that we could use added assistance for course development as well as student support to meet student demand. Specifically, video capabilities need to be enhanced from both a production as well as a distribution standpoint.

12. The human performance laboratory is inadequate to meet the growing needs in Exercise Science, K-12 Teaching and Athletic Training. The multi-purpose area used for the academic strength and conditioning needs an increase in space and an updating in the equipment.

Response: We are happy to report that since the last program review we have added a vast amount of new state of the art facilities and equipment in the Maverick Center. These include the Monfort Family Human Performance Laboratory, new athletic training facility, new classrooms, a new student recreation center, and a new varsity weight room.

13. I would recommend that the college review the advising system for the entire college. It would not be appropriate to recommend that one department change its advising procedures without the continuity of the entire college.

Response: The students in the B.A. in Kinesiology are advised by the faculty within the Kinesiology Department. The students self-select their advisors and/or are assigned advisors by both the advising center and the head of Kinesiology. Students are encouraged to meet with their advisor at a minimum of once per year. The workload for advising can be quite burdensome because of the number of majors in the area. Furthermore, faculty work in student registration programs during the academic year and summer, where one-on-one advising occurs. Our department's advising skills are of a very high quality, as we have an excellent matriculation and graduation rate as well as an excellent acceptance rate for our students going on to graduate school.

d. Mission statement and goals for the program, including the program's centrality to CMU's role and mission and strategic plan

Mission Statement for the Department of Kinesiology: Our mission is to promote wellness and the benefits of physical activity through excellence in teaching, scholarship, and professional service.

Program goals for the B.A in Kinesiology:

1. Provide students with an understanding of the anatomical, biological, physiological, historical, sociocultural, and philosophical foundations of human movement.
2. Provide students with the knowledge and skills needed to succeed in careers such as the following: fitness program management, wellness program directors, licensed physical education teachers, and adaptive physical education specialists.
3. Provide students the knowledge and skills necessary to enter graduate programs in: teacher education, adapted physical education, exercise science, physical therapy, and occupational therapy.
4. Prepare students for national certification with the following organizations: the American College of Sport Medicine; the National Strength and Conditioning Association; the National Council for Accreditation of Teacher Education, and the American Red Cross.

The baccalaureate degree in Kinesiology directly supports the role and mission statement of the college. Our programs are professional and science based (i.e., adapted physical education, fitness and health promotion, and K-12 teaching). In addition, having a degree program in Kinesiology directly addresses the "wellness lifestyle" emphasis of the college's mission statement by actively promoting voluntary human movement.

The following three goals of the ten Colorado Mesa University goals for a baccalaureate graduate that the Kinesiology program specifically addresses are as follows: Be able to think critically and creatively; have knowledge of the natural world and an understanding of scientific methods; possess the knowledge and skills necessary to achieve a healthy lifestyle.

The College's performance contract with the Colorado Commission on Higher Education articulates CMU's commitment to the State's in the following goal in the University's 2010 the Strategic Plan: Improve academic competencies and provide learning experiences that (1) foster the development of skills and abilities that prepare students for the global economy; (2) prepare students for continuing, graduate or postgraduate professional studies; (3) ensure the transferability of general education courses; and (4) establish critical thinking and logic skills essential to full participation in a democratic society.

e. How the program's curriculum supports other majors/minors and general education requirements

In keeping with the published philosophy and goals of a baccalaureate education at Colorado Mesa University, the B.A. in Kinesiology aligns nicely with them. Specifically, our students study "the origins and structure of modern society" through the lens of sport, and specifically how the historical, sociological, physiological, and managerial aspects of sport affects society. Further, the B.A. in Kinesiology augments CMU's goals for general education. In particular, the curriculum supports being able "to communicate effectively in the English language," to "be aware of the great moral, ethical, and philosophical issues which have endured the ages," to "have an understanding of the multicultural nature of [the] world," "to think critically and creatively," and particularly to understand "the complexities of social, economic, and political systems" as well as to "possess the knowledge and skills necessary to achieve a healthy lifestyle."

The B.A. in Kinesiology offers courses that are taken by other majors across campus for lower division upper-division electives. KINE 100 (Health and Wellness) is a requirement for all bachelor degrees and associate degrees offered by the university. KINE 265 is a choice in the applied studies section on general education requirements and is a requirement for many of the health sciences majors. Biology students often take some of our courses to help them fill their prerequisites for graduate programs in physical therapy. The personal training minor is popular with students across campus.

f. Location/comparative advantage

The part of the kinesiology program that seems to offer the most impressive comparative advantage is the existence of the Monfort Family Human Performance Laboratory. See description below.

g. Any unique characteristics of the program

The Kinesiology program is home to the Monfort Family Human Performance Lab. This state-of-the-art facility boasts some of the most technologically advanced equipment and capable personnel west of the Rocky Mountains. The Monfort Family Human Performance Laboratory provides a myriad of services for community members, athletes, students and faculty. This integrative multi-use human performance laboratory provides advanced physiological and biomechanical performance and wellness testing, services not currently available in Mesa County. It offers outstanding student-learning opportunities and involvement in many different research projects.

Many of the courses in the B.A. in Kinesiology program can be delivered in both the online and traditional environments. This program was one of the first degrees on campus to facilitate the latest technology to allow students to complete the program in a "distance" format, where we use online technology and both synchronous and asynchronous, self-paced courses over a semester. The courses have been received well by our students.

2. Curriculum

a. The program's curriculum in terms of its breadth, depth, and level of the discipline

Program Sheets are located in Appendix A and Program Brochures are located in Appendix B.

The required foundation and core courses for the B.A. in Kinesiology are: Human Anatomy and Physiology with a separate lab, Human Nutrition (Fitness and Health Promotion concentration only), History and Philosophy of Physical Education, Applications of Physical Fitness and Exercise Prescription, Exercise Physiology with a separate lab, Anatomical Kinesiology, Organization, Administration, and Legal Considerations, First Aid and CPR for the Professional Rescuer, and Senior Seminar. The intention of these foundation and core courses is to foster a learning experience that provides the physiology, anatomy and history of the field with the practical application of these principles. The intention of the required concentration courses is to further enhance the student's knowledge of specific applications within various settings that are specific to the discipline being studied.

The Adapted concentration is designed to help students prepare to work with individuals with special needs. This concentration has the most advantages when students choose to double concentrate with either the Fitness and Health Promotion concentration or the K-12 Teaching concentration.

The Health and Fitness Promotion concentration is designed to meet the guidelines established by the National Commission for Health Education Credentialing (NCHEC). Specific courses designed to meet these guidelines include: School Health Education, Health and Fitness Assessment, Advanced Strength and Conditioning or Clinical Exercise Physiology, Advanced Exercise Prescription, Community Health, Worksite Health Promotion, and Human Nutrition.

The K-12 Teaching concentration is designed to meet the guidelines established NASPE and NCATE. This was accomplished with National Recognition in the summer of 2012. Specific courses designed to meet these guidelines include the following methods courses: Methods of Lifetime, Individual, and Dual Activities, Methods of Team Activities, Methods of Dance and Gymnastics, Methods of Teaching Elementary Physical Education, Creative Play and Literacy, and Methods of Teaching Secondary Physical Education.

The Personal Training minor is designed for student interested in fitness and personal training. Students engage in practical experiences that help them with the possibility of a future career in personal training. Students explore subject areas that include: anatomy, physiology, kinesiology, applications of physical fitness and exercise physiology.

b. Program currency. Curricular changes made since the last program review

The B.A. in Kinesiology previously had the following five concentrations: adapted physical education; athletic training; exercise science; K-12 teaching; and sport and fitness management. In 2007 the sport and fitness management program evolved into a separate degree program: B.S. in sport management. In 2007 the athletic training program evolved into a separate degree program: B.S. in athletic training. In 2010 the fitness and health promotion concentration was created. In 2011 the exercise science program evolved into a separate degree program: B.S. in exercise science. In 2011 the B.A. continued with the following three concentrations: adapted physical education, fitness and health promotion, and K-12 teaching.

In response to the needs of students and accreditation guidelines we have made various changes to the curriculum since the last program review. We have changed the names and refined the course descriptions for the following courses: School Health Education (formerly School and Personal Health), Health and Fitness Assessment (formerly Tests and Measurements in Sport and Physical Education), Advanced Strength and Conditioning (formerly called CSCS Preparation), Clinical Exercise Physiology and Advanced Exercise Prescription (formerly called ACSM HFS Prep). We have added the following new courses:

Methods of Lifetime, Individual, and Dual Activities, Creative Play and Literacy, Community Health, Worksite Health Promotion, Human Nutrition, and Sport Psychology.

c. Description of program delivery locations and formats and how it has shifted to meet the changing needs of its students.

To meet the needs of our current student populations, we have tried to increase our evening, online, J-Term, and summer offerings. We have also tried to increase the number of courses we offer at the Montrose campus.

3. Analysis of Student Demand and Success:

a. Number of majors (by concentration(s)) and minors

Since becoming an official baccalaureate degree, the B.A. in Kinesiology program has prospered and grown tremendously. We currently have over 900 majors in the Department of Kinesiology. The B.A. in Kinesiology has specifically has over 400 majors. As student populations adjust to the new degree choices, we expect the Fitness and Health promotion concentration to be the most popular within the B.A. Kinesiology degree.

Table 1. Number of majors (by concentration(s)) and minors

Degree	Major	2007-08		2008-09		2009-10		2010-11		2011-12	
		1st Major	All	1st Major	All	1st Major	All	1st Major	All	1st Major	All
BA	Adapted PE	7	15	10	16	16	26	12	29	18	37
BA	Exercise Science	139	159	139	160	200	224	261	282	156	178
BA	Teaching (K-12)	68	81	76	87	87	96	101	109	82	96
BA	Corporate Fit		1		1				1		
BA	Fitness/Health Promotion									66	70
PB	Prov Bacc					1	1	13	13	19	19
TOTAL		214	256	225	264	304	347	387	434	341	400

Degree	Minor	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Minor	Personal Fitness Trainer	12	13	21	23	20
Minor	Wellness/Corporate Fitness	6	2	2	2	
Grand Total		18	15	23	25	20

b. Registration and student credit hours by student level

In the past six years we have increased both the amount of sections of courses we offer within the major and have also had to increase the class capacity limits. Basically, we are offering more sections of courses and have higher enrollments in many of our courses. Core courses currently often have an enrollment of 40 to 50 students, whereas six years ago the average enrollment was closer to 25 to 30 students. Tables 2 and 3 include all four

Kinesiology majors, which include: B.A. Kinesiology, B.S. Exercise Science, B.S. Sport Management, and B.S. Athletic Training.

Table 2: Registrations and student credit hours by student level

Subject	Student Level	2007-08		2008-09		2009-10		2010-11		2011-12	
		Enrolled	SCH	Enrolled	SCH	Enrolled	SCH	Enrolled	SCH	Enrolled	SCH
KINA	FR	987	987	836	836	1259	1259	1510	1510	1498	1498
	SO	891	891	960	960	1203	1203	1398	1398	1549	1549
	JR	358	358	381	381	444	444	499	499	497	497
	SR	464	464	508	508	521	521	628	628	649	649
	Grad							1	1		
	Non-Deg	11	11	12	12	13	13	24	24	21	21
	PBL	4	4	5	5	3	3	11	11	5	5
Subtotal		2715	2715	2702	2702	3443	3443	4071	4071	4219	4219
KINE	FR	1172	1618	1042	1423	1635	2353	1923	2882	1989	3114
	SO	893	1629	949	1834	1098	2058	1510	2939	1680	3339
	JR	688	1689	648	1588	855	2118	1011	2466	1081	2602
	SR	1134	2984	1230	3333	1218	3312	1496	3967	1481	3984
	Grad	5	15	2	6	2	6	9	27		
	Non-Deg	58	90	42	68	33	55	52	92	13	19
	PBL	18	52	10	26	22	58	24	72	10	30
Subtotal		3968	8077	3923	8278	4863	9960	6025	12445	6254	13088
Grand Total		6683	10792	6625	10980	8306	13403	10096	16516	10473	17307

c. Registrations and student credit hours (fall and spring terms) subtotaled by course level

Table 3: Registrations and student credit hours (fall and spring terms) subtotaled by course level

Subject	Course Level	2007-08		2008-09		2009-10		2010-11		2011-12	
		Enrolled	SCH	Enrolled	SCH	Enrolled	SCH	Enrolled	SCH	Enrolled	SCH
KINA	100	2658	2658	2665	2665	3407	3407	4040	4040	4199	4199
	200	29	29	22	22	28	28	18	18	15	15
	300	17	17	6	6	7	7	7	7	3	3
	400	11	11	9	9	1	1	6	6	2	2
KINA Total		2715	2715	2702	2702	3443	3443	4071	4071	4219	4219
KINE	100	1718	1718	1593	1593	2154	2154	2505	2505	2536	2536
	200	1008	2969	1061	3112	1339	3951	1702	5000	1801	5297
	300	724	1833	669	1729	755	1962	1072	2683	1127	2857
	400	510	1533	599	1841	613	1887	734	2221	789	2395
	500+	8	24	1	3	2	6	12	36	1	3
KINE Total		3968	8077	3923	8278	4863	9960	6025	12445	6254	13088
Grand Total		6683	10792	6625	10980	8306	13403	10096	16516	10473	17307

d. Number of graduates (by concentration)

In the 2011-2012 academic year we graduated 101 persons (63 were in the B.A. Kinesiology program), our largest graduating class to date.

Table 4: Number of graduates (by concentration)

Degree	Major	2007-08		2008-09		2009-10		2010-11		2011-12	
		1st Major	All	1st Major	All	1st Major	All	1st Major	All	1st Major	All
BA	Adapted PE		1	2	4	2	2	1	1	1	3
	Exercise Science	19	19	29	29	28	28	28	28	38	38
	Teaching (K-12)	9	9	11	12	9	10	16	16	18	18
	Kinesiology: Fitness and Health Promotion									2	2
Total		28	29	42	45	39	40	45	45	59	61

e. One-year retention rates and four- and six-year graduation rates

Retention data from Fall 2010 and Fall 2011 is illustrated in the table below. Out of the 338 Kinesiology majors, 232 (69%) were retained within the department or graduated.

Colorado Mesa University Fall 2011 Status of Students Enrolled Fall 2010

Table 5 : One-year retention rates

Degree	KINESIOLOGY		Not Retained		Retained CMU		Retained in dept		Retained in major		Graduated		Grad and retained		Total	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%
PB	2910	Kinesiology Prov Bacc	9	69%	2	15%	1	8%	1	8%		0%		0%	13	100%
BA	3132	Kinesiology-Adapted PE	5	38%	1	8%	3	23%	4	31%		0%		0%	13	100%
	3135	Kinesiology-Exercise Science	47	21%	16	7%	21	9%	111	50%	24	11%	3	1%	222	100%
	3137	Kinesiology-Teaching (K-12)	20	22%	6	7%	9	10%	39	43%	16	18%		0%	90	100%
Total			81	24%	25	7%	34	10%	155	46%	40	12%	3	1%	338	100%

f. Student successes/recognitions, especially in external student competitions

Our Kinesiology students have presented the last three years at the CMU Showcase Program. Presentations examples include: What to wear when running in the heat; The study of gender interaction and utilization of the recreation center; Fans and how they affect sports in society, Pre-cooling effect on run to exhaustion; How coaches make decision; and What it takes to be an elite athlete in high school.

Students in the program often attend professional meetings for their respective disciplines. Some students have successfully presented papers and sessions for their professional colleagues. Examples of professional conventions attended include: The American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD), American College of Sports Medicine (ACSM), Colorado Association of Health, Physical Education, Recreation and Dance (COAHPERD), Rocky Mountain Chapter of the American College of Sports Medicine (RMACSM), and National Athletic Trainers Association (NATA).

Our Kinesiology students competed at the regional Rocky Mountain American College of Sports Medicine conference in spring of 2012. They came in first place in the question and answer competition (Jeopardy format) against several regional colleges and universities.

This allowed them to go on to compete at the American College of Sports Medicine Annual Meeting to compete against the winners of each region of the United States.

4. Program Resources

a. Faculty

Currently, the faculty teaching courses in the B.S. in Kinesiology from the Department of Kinesiology include eight full-time, tenured or tenure-track faculty members, and one full-time instructor. Each full-time, tenured or tenure-track faculty member holds an earned doctorate. The faculty members teaching courses in the B.A. in Kinesiology, with their qualifications and rank are listed below in alphabetical order:

Dr. Richard "Dick" Bell, BS, MA, JD, EdD, Instructor of Kinesiology
 Dr. Jill Cordova, BA, MA, PhD, Professor of Kinesiology (tenured)
 Dr. Keith Fritz, BS, MS, PhD, Associate Professor of Kinesiology (tenured)
 Dr. Kristin Heumann, BA, MS, PhD, Assistant Professor of Kinesiology (tenure-track)
 Dr. Guy Leadbetter, BA, MS, PhD, Professor of Kinesiology (tenured)
 Dr. Steven Ross Murray, BS, MS, DA, Professor of Kinesiology (tenured)
 Mr. Robert Ryan, BA, MA, Assistant Professor of Kinesiology (tenure-track)
 Dr. Elizabeth Sharp, BS, MEd, PhD, Assistant Professor of Kinesiology (tenure-track)
 Dr. Gerald Smith, BS, MS, PhD, Associate Professor of Kinesiology and Director of Monfort Family Human Performance Laboratory

1) Ratio of full-time equivalent students (FTES) to full-time equivalent faculty (FTEF)

Our Ratio of full-time equivalent students (FTES) to Full-time equivalent faculty (FTEF) has also increased over the years. Basically we are teaching more courses with higher enrollments. Tables 6 and 7 include FTES and Faculty/Staff for all four Kinesiology majors, which include: B.A. Kinesiology, B.S. Exercise Science, B.S. Sport Management, and B.S. Athletic Training.

Table 6: Ratio of full-time equivalent students (FTES) to full-time equivalent faculty (FTEF)

Subject	2007-08			2008-09			2009-10			2010-11			2011-12		
	FTES	FTEF	FTES: FTEF	FTES	FTEF	FTES: FTEF	FTES	FTEF	FTES: FTEF	FTES	FTEF	FTES: FTEF	FTES	FTEF	FTES: FTEF
KINA	90.5	5.1	17.8	90.1	5.0	18.0	114.8	5.8	20.0	135.7	6.8	20.0	140.6	7.8	18
KINE	269.2	19.7	13.7	275.9	18.8	14.7	332.0	19.5	17.0	414.8	20.9	19.9	436.3	23.6	18
Grand Total	359.7	24.8	14.5	366.0	23.8	15.4	446.8	25.3	17.7	550.5	27.7	19.9	576.9	31.3	18

2) Course credit hours and student credit hours by faculty type (i.e., tenured/tenure-track, instructor, administrators/staff/coaches, lecturers)

Tenured, tenure-track, and full time faculty teach the majority of the academic courses within the B.A. in Kinesiology program. However, we do have quite a few of the courses taught by part-time instructors.

Table 7: Course credit hours and student credit hours by faculty type (i.e., tenured/tenure-track, instructor, administrators /staff/coaches, lecturers)

Subject	Faculty Type	2007-08			2008-09			2009-10			2010-11			2011-12		
		CCH	SCH	% SCH	CCH	SCH	% SCH	CCH	SCH	% SCH	CCH	SCH	% SCH	CCH	SCH	% SCH
KINA	T/TT	10	94	3%	11	121	4%	13	132	4%	15	195	5%	18	280	7%
	Full Time, Non TT	1	19	1%	1	19	1%	1	22	1%	1	23	1%	2	120	3%
	Admin/Coach	90	2139	79%	88	2127	79%	92	2594	75%	100	2844	70%	108	2788	66%
	Part Time	21	463	17%	20	435	16%	32	695	20%	47	1009	25%	58	1031	24%
KINA Total		122	2715	100%	120	2702	100%	138	3443	100%	163	4071	100%	186	4219	100%
KINE	T/TT	253	4152	51%	248	4422	53%	278	6041	61%	260	7523	60%	299	7146	55%
	Full Time, Non TT	109	1069	13%	104	1236	15%	103	1447	15%	126	1408	11%	136	1589	12%
	Admin/Coach	91	2659	33%	82	2172	26%	80	2254	23%	95	3057	25%	105	3491	27%
	Part Time	19	197	2%	17	448	5%	8	218	2%	20	457	4%	26	862	7%
KINE Total		472	8077	100%	451	8278	100%	469	9960	100%	501	12445	100%	566	13088	100%
Total	1 -T/TT	263	4246	39%	259	4543	41%	291	6173	46%	275	7718	47%	317	7426	43%
	3 -FT Non TT	110	1088	10%	105	1255	11%	104	1469	11%	127	1431	9%	138	1709	10%
	5 -Admin/Coaches	181	4798	44%	170	4299	39%	172	4848	36%	195	5901	36%	213	6279	36%
	6 -PT	40	660	6%	37	883	8%	40	913	7%	67	1466	9%	84	1893	11%
Grand Total		594	10792		571	10980		607	13403		664	16516		752	17307	100%

Campus Total (Excluding WCCC)

Faculty Type	AY 2007-08		AY 2008-09		AY 2009-10		AY 2010-11		AY 2011-12	
	SCH	%	SCH	%	SCH	%	SCH	%	SCH	%
1 -T/TT	82794	65%	78943	62%	88108	60%	88414	53%	89594	50%
3 -FT Temp	18696	15%	25743	20%	26883	18%	36555	22%	38886	22%
5 -Admin/Coaches	5738	5%	5200	4%	6650	5%	7700	5%	7350	4%
6 -PT	19423	15%	17469	14%	25852	18%	34321	21%	42416	24%
Total	126651		127355		147493		166990		178246	

3) Faculty successes/quality/recognitions - details related to teaching, advising, scholarship, service, and other achievements

Teaching:

Full-time, tenure-track faculty members teach 24 credit hours each academic year, typically 12 hours per semester. The overall quality of teaching within the department is very high. Students consistently rate the professors with scores of a 4.0 or higher for the mean of means and scores of 4.0 or higher on the median of medians (on a 5-point scale) during the evaluation process, with the majority of instructors receiving scores of 4.5 or higher for their courses. It is the rare exception for a professor to be rated below 4.0 on the student evaluations. In addition, the faculty members within the department often use innovative technologies and a variety of effective teaching methodologies in the classroom that serve our students well. Peer and student comments support the assertion that the quality of teaching within our department is high, as evidenced by alumni satisfaction surveys and peer reviews.

Advising:

The students in the B.A. in Kinesiology are advised by the faculty within the Kinesiology Department. The students self-select their advisors and/or are assigned advisors by both the advising center and the head of Kinesiology. Students are encouraged to meet with their advisor at a minimum of once per year. The workload for advising can be quite burdensome because of the number of majors in the area. Furthermore, faculty work in student registration programs during the academic year and summer, where one-on-one advising occurs. Our department's advising skills are of a very high quality, as we have an excellent matriculation and graduation rate as well as an excellent acceptance rate for our students going on to graduate school.

Scholarship:

The faculty scholarship productivity since the previous program review in 2006 is listed below. The specific bibliographical citations for our departmental publications, by faculty member, are listed in their enclosed curricula vitae. The scholarship productivity by faculty member and type is listed in the table below.

Table 8: Scholarship Productivity by Faculty from 2006 to 2012

Faculty Member	Refereed Manuscripts	Refereed Presentations	Books
Dr. Richard "Dick" Bell*	3	7	1 (chpt.)
Dr. Jill Cordova	0	2	
Dr. Keith Fritz	0	6	
Dr. Kristin Heumann*	2	15	
Dr. Guy Leadbetter	3	3	
Dr. Steven Murray#	31	14	2#
Dr. Robert Ryan	3	6	6 (chpt)
Dr. Elizabeth Sharp*	0	2	
Total	42	55	2 books 7 chapters

*Dr. Sharp and Dr. Heumann are in their second year of employment at Colorado Mesa University, so they are in the process of submitting manuscripts for publication.

#Dr. Murray wrote a new book, *Fitness Walking*, and created a new edition of another text, *Wellness for Life*, as well as converted the hard-copy text to an interactive website and eText.

Service:

Our faculty members perform outstandingly with respect to service, for the campus, for the community, and for the profession. Being a smaller faculty, all departmental faculty members are on many campus committees, with some professors serving on as many as eight or nine committees in a single year.

Dr. Bell has served as the chairman of the Educational Access Services committee from 2006 to 2011, and he was the chairman of the Assessment Committee from 2007-2012 and served on numerous campus-wide committees, including faculty search

committees. He served as the chairman of the Graduate Council from 2008 to 2010, and the vice-chairman from 2006 to 2007. Dr. Bell taught international workshops on sport management in the Kingdom of Bahrain, and in Thailand.

Dr. Cordova has been the Head of the Department of Kinesiology since 2007. Since 2006 she has been on several committees across campus. These include: NCATE/NASPE Accreditation Committee, Athletic Training Education Program Accreditation Committee, Monfort Family Human Performance Laboratory Advisory Board, Academic Policies, Chair, K-12 Advisory Board, NATA Athletic Training Accreditation Committee, Curriculum Committee: Department of Kinesiology, various search committees, Who's Who among Students in American Universities and Colleges, Faculty Advisor K-12 Student Club, and the Campus Community Wellness Committee. Dr. Cordova has been recognized by the Department of Veterans Affairs by being given its Special Contribution Award for work with disabled veterans from each year for the past six years.

Dr. Fritz has been on several committees across campus. These include: Faculty Senate, Student Show Case, Academic Policies, Professional Development Funding, North Central Accreditation, Judicial Board, Tenure Evaluation, Wellness committee, Tenure and Promotion committee, Student Showcase Committee, Chair search committee K-12 PE position, and several search committees for departments across campus.

Dr. Heumann has been on the following campus committees: Graduate Curriculum Committee, Faculty Senate Benefits and Salary Committee, Benefits Committee, Exercise Science Advisory Board Member, the Monfort Family Human Performance Lab Director Search Committee, the Head Swim Coach for Athletics Search Committee, Who's Who among Students in American Universities and Colleges, and the Wellness committee. Dr. Heumann is in her second year of employment at Colorado Mesa University, therefore, we anticipate her service responsibilities will increase in the future.

Dr. Leadbetter has been on several committees across campus. These include: the Curriculum Committee, Graduate Planning Committee, Tenure/Promotion committees, Search Committees (Chair on two), Nutrition/alcohol presentations to sports teams, Exercise Science Advisory Committee (Chair), Search Committee for Lab Director (twice as Chair), and the Search Committee Chair for Exercise Science Professor. Dr. Leadbetter has given several Community presentations about the Monfort Human Performance Lab. Dr. Leadbetter supervises an average of six to nine students at the RMACSM Conference each year. Dr. Leadbetter has been recognized by the Department of Veterans Affairs by being given its Special Contribution Award for work with disabled veterans from each year for the past six years.

Dr. Murray was on the Tenure and Promotion Committee from 2007 to 2011, and elected as the chairman of the sub-committee for promotion from Assistant Professor to Associate Professor. He served as the chairman of the Pre-Tenure and Promotion Committee from 2009 to 2011 and was the chairman from 2009 to 2010 and a member several committees on campus. Dr. Murray taught an international workshop on sport management in the Kingdom of Bahrain. Dr. Murray was an invited reviewer or referee for several international, peer-reviewed journals, a contributing editor for two other international journals, and served as an invited grant reviewer for the National Association for Sport and Physical Education's Run for Something Better School® Awards Program from 2010 to 2012. Moreover, he was a collaborative graduate faculty member for Minnesota State University, Mankato, serving as an outside reviewer for six master's students' research committees.

Mr. Ryan has been on several committees across campus. These include: Distance Education: Best Practices Committee, Academic Technology Advisory Committee, Undergraduate Curriculum Committee, Graduate Curriculum Committee, and the Search Committee - Chair - Monfort Family Human Performance Lab. Regionally and locally, Mr.

Ryan is also involved in the following: Colorado Athletic Trainers Association, Board of Directors, American Red Cross, and the Western Colorado Chapter: Health and Safety Advisory Board.

Dr. Sharp has been a faculty senator, an advisor for numerous student clubs on campus, and has served on the Distance Learning and Technology Committee and other minor, campus-wide and departmental committees. Dr. Sharp has been involved in the Colorado Association of Health, Physical Education, Recreation, and Dance (COAHPERD), serving as the chairman of the Higher Education and Research Division and as a chairman of the Physical Activity Section of the COAHPERD Board. Dr. Sharp is in her second year of employment at Colorado Mesa University, therefore, we anticipate her service responsibilities will increase in the future.

4) Faculty vitas included in Appendix C

b. Financial Information (finance and budget):

In the past five years our budget and expenditures have increased by 69% and our student credit hours have increased by 62%. A substantial amount of our increases in expenditures is the result of additional salaries for part-time and full-time faculty in response to increased enrollments. Table 9 represents the budget for the Department of Kinesiology. This includes all four majors: B.A. Kinesiology, B.S. Exercise Science, B.S. Athletic Training, and B.S. in Sport Management. Table 10 represents the budget for the Monfort Family Human Performance Laboratory.

Table 9: DEPARTMENT OF KINESIOLOGY - Ratio of actual expenditures/student credit hours

	Budget Expenditures	Actual Expenditures	Student Credit Hours	Ratio of Actual Expenditures/Student Credit Hours
2008	\$ 786,768	\$ 715,200	10,792	66.27
2009	\$ 872,127	\$ 733,687	10,980	66.82
2010	\$ 804,236	\$ 812,801	13,403	60.64
2011	\$ 813,488	\$ 841,654	16,516	50.96
2012	\$ 992,987	\$ 1,033,123	17,307	59.69

Table 10: MONFORT FAMILY HUMAN PERFORMANCE LABORATORY

	Budget Revenues	Actual Revenues	Budget Expenditures	Actual Expenditures
2008	\$0	\$0	\$0	\$0
2009	\$0	\$0	\$0	\$0
2010	\$0	\$2,170	\$0	\$0
2011	\$0	\$4,625	\$104,121	\$144,309
2012	\$18,839	\$20,124	\$163,516	\$113,991

External funding:

During this review period the Department of Kinesiology did receive a generous grant from the Monfort Family Foundation in the amount of \$500,000 for the initial capital equipment and supplies needed to set up the Monfort Family Human Performance Laboratory.

We also received from the Mesa County Health Department the amount of \$2,000 for the delivery of specialized exercise courses for the Steps to a Healthier US initiative through the Mesa County, Colorado Live Well program, 2006.

c. Library assessment included in Appendix D

On the whole, our library collections are adequate for our programs. Listed below is the October 2012 Library's evaluation of the total collection related to the B.A. in Kinesiology. This includes; Strength, Weaknesses and Recommendations.

1. Evaluation of the total collection

a) Strengths

1. Currency – At least 1/3 of the collection for each concentration area has been published since 2000.
2. Current growth is strong for K-12 teaching and Fitness & health promotion concentrations and moderately strong for Adapted PE.
3. Media collection is varied providing support for many topics.
4. There is a strong collection of books on teaching and techniques for sports and activities that would be useful to the K-12 teacher.

b) Weaknesses

1. Adapted PE is the weakest area with less than 100 books.
2. Subject areas that are weak include health promotion and community health.
3. Participation of faculty in selection process – most of the recommendations come from 2 professors.

2. Recommendations

- a) Give higher priority to the purchase of materials in the weak areas – Adapted PE, health promotion and community health.
- b) Consult departmental faculty about replacing the videos in VHS format with the DVD format since the campus IT department is no longer supporting the VHS format.
- c) Purchase e-books whenever possible to increase student access “beyond the walls”.
- d) Encourage greater faculty participation in the selection of materials.
- e) Review pre-1990 materials for continued relevance to the program. Identify titles that should be kept – core, historical, and still current titles – and those that need to be withdrawn.

d. Physical facilities

The Department of Kinesiology has access to a variety of facilities within Saunders Field House of the Maverick Center (i.e., multiple classrooms, a human performance laboratory, an athletic training room, gymnasia, tennis courts, outside activity fields, and a swimming pool) which we share with the Department of Athletics, the Department of Campus Recreation, and the Department of Health Sciences. The facilities allow us to conduct our courses in an

effective manner. Adequate office space and equipment are available for faculty and staff, but with respect to our increased growth additional office space may be needed for future faculty and students in the immediate years. The expansion of the Maverick Center and the Maverick Pavilion provide more activity space for the Department of Kinesiology's service activity program, so we are better able to meet the needs of our students. Moreover, the addition of the Monfort Family Human Performance Laboratory has increased the laboratory opportunities for our students and faculty.

e. Instructional technology and equipment

Within the Maverick Center, we have access to “smart” classrooms, where we hold the majority of our lecture-based courses. The classrooms meet our instructional needs for the most part. The technology in the classrooms is dated—which in today's environment takes only a few years—and up-to-date projectors for the computers would be beneficial.

5. Student Learning Outcomes and Assessments

a. Student learning outcomes (SLOs) for the program and how they relate to the program's mission statement, courses, and the achievements of the institution-wide student learning outcomes.

Kinesiology faculty members have made significant progress in the development of program student learning outcomes (SLOs) and assessments. Much of this effort evolved following the January 2012 faculty development workshop by Paul Gaston on the Lumina Foundation's Degree Qualifications Profile (DQP) and the subsequent survey on campus-wide SLOs. Listed below are the student learning outcomes (SLOs) for each of the concentrations. Each concentration also has a Curriculum Map (Matrix I) located in Appendix E that shows the link between student learning outcomes and the courses in the program's curriculum. These student learning outcomes are directly related to the program's mission statement which is “to promote wellness and the benefits of physical activity through excellence in teaching, scholarship, and professional service.”

Student learning outcomes (SLO) for the program

Adapted Physical Education

- SLO 1: Describe and apply physiological and biomechanical concepts related to skillful movement, physical activity and fitness.
- SLO 2: Describe and apply motor development theory and principles related to skillful movement, physical activity, and fitness.
- SLO 3: Identify the scope and definitions of health, fitness, and human performance
- SLO 4: Plan, develop, and implement appropriate learning experiences that address the diverse needs of all individuals
- SLO 5: Use appropriate assessments to evaluate student learning before, during, and after instruction.

Fitness and Health Promotion

- SLO 1: Identify the principle systems of the human body and describe the functions of each system.
- SLO 2: Describe individual body systems and how they are interrelated.(skeletal, nervous, respiratory...cardiovascular)
- SLO 3: Identify risk factors associated with chronic disease
- SLO4: Identify exercise cautions and other safety concerns

SLO 5: Identify the scope and definitions of human performance

SLO 6: Describe how physical activity relates to health.

K-12 Teaching

SLO1: Physical education teacher candidates can describe and apply discipline-specific scientific and theoretical concepts critical to the development of physically educated individuals.

SLO 2: Physical education teacher candidates are physically educated individuals with the knowledge and skills necessary to demonstrate competent movement performance and health enhancing fitness levels.

SLO 3: Physical education teacher candidates plan and implement developmentally appropriate learning experiences aligned with local, state, and national standards to address the diverse needs of all students.

SLO 4: Physical education teacher candidates use effective communication and pedagogical skills and strategies to enhance student engagement and learning.

SLO 5: Physical education teacher candidates utilize assessments and reflection to foster student learning and inform instructional decisions.

SLO 6: Physical education teacher candidates demonstrate dispositions essential to becoming effective professionals.

Many of the courses within the Kinesiology program directly provide experiences that support the Institution's student learning outcomes for a Baccalaureate Degree. Students are participate in participate in projects, write papers, conduct research, give oral presentations, and participate in applied learning that requires specialized knowledge. They analyze data, apply quantitative analysis methods, and evaluate hypotheses. Using their intellectual skills and critical thinking, they formulate conclusions.

Institution-wide student learning outcomes for a Baccalaureate Degree

The CMU baccalaureate degree graduate will be able to:

1. construct a summative project, paper or practiced-based performance that draws on current research, scholarship and/or techniques, and specialized knowledge in the discipline (applied learning; specialized knowledge);
2. analyze data critically, reason logically, and apply quantitative analysis methods correctly to develop appropriate conclusions (intellectual skills – quantitative fluency);
3. make and defend assertions about a specialized topic in an extended well-organized document and an oral presentation that is appropriate to the discipline (intellectual skills – communication fluency); and
4. Identify assumptions, evaluate hypotheses or alternative views, articulate implications, and formulate conclusions (intellectual skills – critical thinking).

b. The direct and indirect measurements that assess the program's student learning outcomes.

Assessment is the ongoing process in which student learning outcomes are defined, student success in achieving those outcomes is measured, and the results are used to implement improvements in curriculum. Thus, the overarching purpose is to gauge what students have learned in the context of program/course expectations and then document the resulting enhancements to program/course delivery. Listed below are the direct and indirect measurements that are designed to help assess the program's student learning outcomes. Additionally, assessment plans and reports for 2007-2011 are located in Appendix H.

Alumni Surveys (Alumni Survey Letter included in Appendix F)

The Kinesiology programs are assessed each year through departmental alumni and employer surveys as part of our annual assessment plan as an ongoing effort to assure a quality Program. Graduates were surveyed to ascertain program effectiveness and satisfaction. Graduates were also surveyed to gather information about current employers and enrollment in graduate school. During 2007-2012 ninety graduates responded to the written survey. On the written survey, satisfaction with overall level of education was surveyed. Ninety-five percent of the students rated their education either very satisfactory or satisfactory. Also on the written survey, satisfaction with education and preparation in the field of study was surveyed. Eighty percent of the students rated their preparation for employment as very satisfactory or satisfactory. Fifteen percent had no comment.

Results from the written survey indicated that 30 (n=90) of the graduates were either in graduate school or had obtained a graduate degree and 21 graduates had jobs in a degree related field. Although, not all of our graduates responded, the survey indicated that our graduates are obtaining jobs in their fields or attending graduate school. Examples for places of employment listed by the respondents included: elementary, middle, and secondary schools, physical therapy clinics, health clubs, hospitals, and large corporate wellness centers. Future graduates will be surveyed during the fall of each year.

Table 11: Alumni responses to the question if their degree program gave them the knowledge and skills necessary for success in the field from the annual assessment report.

	2007-08	2008-09	2009-10	2010-11	2011-12	Totals
Very Satisfactory	10		6	3	26	45
Satisfactory	12		5	1	23	41
Unsatisfactory	2		1	0	0	3
N/A or No Comment	0		0	0	1	1
Total Responses	24	0	12	4	50	90

Table 12: Alumni responses to the question of how prepared they were for employment.

	2007-08	2008-09	2009-10	2010-11	2011-12	Totals
Very Satisfactory	8	0	4	1	22	35
Satisfactory	11	0	4	0	23	38
Unsatisfactory	1	0	0	0	1	2
N/A or No Comment	3	0	4	0	8	15
Total Responses	23	0	12	1	54	90

Employer Survey (Employer Survey Letter included in Appendix G)

During 2010-2012, surveys were sent out to current employers of program graduates. The twenty-two employers who responded included: corporations, athletic clubs, schools, hospitals, and wellness centers. Employers were asked, how would you rate the overall performance of these employees. Thirteen of the employers were very satisfied and five employers were satisfied. Four employers had no response to this question. Employers were also asked to list the employee's strengths and weaknesses. Future employers will be interviewed as well.

Table 13: Employer responses to the question how would you rate the overall performance of these employees

	2007-08	2008-09	2009-10	2010-11	2011-12	Totals
Very Satisfactory				6	7	13
Satisfactory				4	1	5
Unsatisfactory				0	0	0
N/A or No Comment				1	3	4
Total Responses	0	0	0	11	11	22

Kinesiology Exit Exam

Kinesiology majors are required to take a senior seminar (capstone) course. This course offers the opportunity for students to develop their portfolios which demonstrate their experiences, involvements in projects, and skills learned. This is also the time period when seniors are asked to take the program's program specific comprehensive exit exam. Results from the exit exam for the last six years are listed below. It is also our intention to begin administering the ETS Proficiency Profile during the seminar course in the near future. This instrument is used to assess students in quantitative fluency, communication fluency, and critical thinking.

Table 14: Number of students passing the EXIT Examination by year

	TOTAL SCORE			KINESIOLOGY CONCENTRATIONS		
	N=	Mean	Range	Adapted PE	Exercise Science	K-12 Teaching
				Mean	Mean	Mean
Fall 2011	23	80.92%	75-93%	81.00%	80.50%	81.25%
Spring 2012	32	82.56%	74-94%	81.00%	84.28%	82.40%
Fall 2010	20	81.55%	76-92%		82.50%	80.60%
Spring 2011	38	81.23%	69-95%	82.00%	82.30%	79.40%
Fall 2009	18	82.62%	72-90%	87.00%	81.86%	79.00%
Spring 2010	10	86.15%	85-90%		86.80%	85.50%
Fall 2008*						
Spring 2009	23	79.00%	69-88%	78.00%	84.00%	75.00%
Fall 2007	16	71.75%	54-92%		79.50%	64.00%
Spring 2008	17	79.33%	63-88%	88.00%	80.00%	70.00%

*Data for Fall 2008 was misplaced.

PLACE Test (State Licensure Exam)

All physical education teachers in the state of Colorado are required to pass, with a score of 73% or better, the Program for Licensing Assessments for Colorado Educators (PLACE) Test. The minimal level of competency is a total PLACE Test score of 220. At Colorado Mesa University, passing scores for the Physical Education subject matter PLACE test must be presented when candidates apply for student teaching. The PLACE test is criterion referenced and objective based. Test subareas include: Human Development, Physical Fitness, Motor Skill Acquisition, Program Development and Implementation. For the past five academic years, all of the teacher licensure candidates in K-12 have passed the PLACE test successfully. The minimal level of competency is a total Place Test score of 220. The averages ranged between 220-269.

Table 15: Number of students passing the PLACE Examination by year

	TOTAL SCORE			SUBAREAS							
	N=	Average	Range	Human Development		Physical Fitness		Motor Skill Acquisition		Program Development & Implementation	
				Avg	Range	Avg	Range	Avg	Range	Avg	Range
2011-2012	9	247	220-269	3.00	2-4	3.66	3-4	3.22	3-4	2.88	1-4
2010-2011	7	248	220-264	3.20	1-4	3.30	3-4	3.30	3-4	3.00	2-4
2009-2010	4	234	225-242	3.70	3-4	4.00	4	3.00	3	2.00	1-3
2008-2009*	6	248	238-264								
2007-2008	5	234	220-247	2.30	2-3	3.70	3-4	3.00	3	3.30	2-4

*Data for the subareas for the 2008-2009 academic year was misplaced by the Center for Teacher Education (CTE). We were unable to retrieve it from the CTE or Place Test administrators.

Additional AAHPERD/NASPE Assessments

Listed below are the 6-8 assessments that were submitted as evidence for meeting the AAHPERD/NASPE standards.

Type and Number of Assessment	Name of Assessment	Type or Form of Assessment	When the Assessment Is Administered
1 Licensure assessment, or other content-based assessment	PLACE Test	State Licensure Test – Field 032 – Physical Education	Semester before student teaching
2 Assessment of content knowledge in physical education	Grades in K-12 Kinesiology core course work	GPA	Throughout student's curriculum
3 Assessment of candidate ability to implement instruction	Teacher work sample-unit-plan and lesson plan	Rubric Based Scoring	Student Teaching
4 Assessment of internship or clinical experiences	Student Intern Evaluation	Rubric Based Scoring	Student Teaching
5 Assessment of candidate effect on student learning	Portfolio	Rubric Based Scoring	End of Student Teaching
6 Additional assessment that addresses AAHPERD/NASPE standards [required]	Skills Assessment	Rubric Based Scoring	Pre-Internship
7 Additional assessment that addresses AAHPERD/NASPE standards [optional]	Fitness Assessment	Rubric Based Scoring	Pre-Internship

Additional Indirect Assessments

K-12 Portfolio: All of the K12 Licensure interns must complete a summative portfolio representing their ability to teach to state content standards and performance based standards. Interns must indicate a positive impact on student learning by showing lesson and unit plans, rubrics, and associated student data showing learning growth as a result of instruction.

Course Evaluations: The department administers course evaluations every semester on every course offering: traditional campus-based classroom, online, hybrid, and distance delivery. These student evaluations are an integral element of faculty and lecturer evaluations and are used to make course changes to better meet established student learning outcomes. As an example, teacher preparation candidates expressed a desire for an additional course in classroom management techniques; a new class was added to the required curriculum, after consultation with partner content areas.

Field Experiences: The Department of Kinesiology has made a commitment to experiential learning for the students enrolled in the program. Internships and various practical experiences are an integrated part of program curriculum. All internships undergo supervision and evaluation using rubrics dictated by program objectives and outcomes. Each of the three concentrations has clinical internship requirements. The program has more than 20 working relationships with corporations, schools, hospitals, and clinics. The State of Colorado requires that all Teacher Education programs include at least 800 clock hours of field experiences accumulated throughout the program. The K-12 Physical Education Program has 212 hours of field experience prior to student teaching and 600 within the student teaching experience for a total of 812 hours.

Advisory Committee Feedback: The Department of Kinesiology has the following active advisory boards: athletic training education program advisory board, Exercise Science and Monfort Family Human Performance Laboratory Advisory Board, and K12 Education/Adapted Advisory Board. Each advisory is made up of community members, professionals in the field, and Colorado mesa University graduates and faculty. The main purpose of each advisory committee is to monitor program offerings and to make suggestions for program improvements. Feedback from the advisory boards has been helpful for program enhancement.

a. Describe program improvements resulting from assessment of SLOs since the last program review.

Kinesiology faculty members have made significant progress in the development of institutional and program student learning outcomes (SLOs) and assessments. Based on results from these ongoing efforts we have made appropriate curriculum changes including addition of courses, deletion of courses, and change in course content when needed. Faculty will continue to refine appropriate assessments for student learning outcomes and establish relevant criteria for success.

6. Future Program Plans

a. Vision for program

The Kinesiology program is interested in and is planning to explore the possibility of adding the following programs: A Personal Training Certificate, An Adventure Education minor, accreditation by the National Commission for Health Education Credentialing (NCHEC), and the implementation of a graduate degree in Exercise Science and/or Sport Management.

b. Strengths and challenges facing program

Strengths:

The greatest strengths of the B.A in Kinesiology are the quality of the faculty and the design of the curriculum. We believe we have highly qualified, experienced, and committed faculty that put students' success as a priority. The faculty members teaching within the program are rated consistently as "excellent" by both their students and supervisors. The faculty members have enhanced their delivery of curriculum by using a variety of teaching strategies and techniques, and these efforts have helped our students succeed and have helped to recruit students to the department. Of particular note is the individual commitment of faculty members to our students both in and out of the classroom. Many faculty members include students in service and research projects, and this helps the overall development of our students. The scholarly productivity, the international service and experiences that the faculty members bring to the classroom, both virtual and traditional, are exceptional, especially considering the regional mission of the institution.

The curriculum of the K-12 Education program aligns with the guidelines developed by The National Association for Sport and Physical Education (NASPE) and is nationally recognized by The National Council for Accreditation of Teacher Education (NCATE). Our Fitness and Health Promotion concentration is designed to align with the National Commission for Health Education Credentialing (NCHEC) guidelines. Having the program designed around these guidelines allows our students better entry into graduate programs at other flagship institutions.

We are especially proud of the practical applications that our students receive in this major. This includes practical experiences in and out of the classroom. Additionally students are involved in field experiences, major club activities (e.g. Exercise Physiology Research Club and K-12 Physical Education Club), practicum courses, internships, experiences in the Monfort Family Human Performance Laboratory, and student teaching. This is a major strength of the program because it provides students with hand-on, professional experience. Examples of these practical experiences include: participation in community health projects in Mesa County, health and fitness screenings at community health fairs, various health and fitness assessments in the Monfort Family Human Performance Laboratory, students also offered a weight loss clinic for adults in Mesa County, Kinesiology majors participated in Special Populations Projects in Mesa County. Organizations with which they provided their services included: District 51 Adaptive Physical Education Programs, Hilltop Residential Programs, Colorado Discover Ability, Grand Junction Regional Center, Veterans Administration Hospital, Center for Independence, Special Olympics, Multiple Sclerosis Society, Long Term Care Facilities, and Kiddn' Around Learning Center for Special Needs Children.

Because of these opportunities, students have often gained enough experiences to help them find employment in a variety of settings. Examples include District 51 School District, Mesa County Health Department, City of Grand Junction, St. Mary's Hospital, Western Orthopedics, and Grand Junction Veterans Hospital, City of Grand Junction, and Colorado Mesa University.

Our students are one of our strengths as well. There is a high acceptance rate for graduates wishing to attend graduate or professional schools. Students score well on standardized testing for licensure or certification, often well above the national average. Students in the program often attend professional meetings for their respective disciplines. Some students have successfully presented papers and sessions for their professional colleagues.

Challenges:

In the future, we must hire additional faculty members to meet our growing enrollment needs and to help ease the advising and committee workloads (i.e., some faculty have over 75 advisees).

With respect to technology, some of the classroom projectors are dated, as mentioned previously, but we believe that this weakness can be addressed in the coming year or two through the planned replacement schedule. Advances in more access to high-speed Internet connections and programs to actively record screen activity are needed to help with our online courses.

Another area of concern is support for our growing online enrollments, specifically assistance for course development as well as student support. Specifically video capabilities need to be enhanced from both a production as well as a distribution standpoint.

Increased support for professional development, scholarly activities, especially the conducting, presenting, and publishing of research, is necessary. In the future, we need to increase the productivity of all the faculty members working within the program.

c. Trends in the discipline that could affect the future planning for the program (if applicable).

Preventative health has become a significant aspect of health care that may require further well-trained graduates that can effectively roll-out and administer preventative health programming. Additionally, with the added dimension of worksite wellness incentives as a component of the Healthcare Reform Act of 2010, it is possible that there will be a higher demand for trained professionals in the worksite health arena.

d. How program review process is being used to improve the program's teaching and learning.

Faculty involvement in the development of institutional and program student learning outcomes (SLOs) and assessments has given the faculty the opportunity to reflect on both their teaching and student learning. Based on results from these ongoing efforts we can continue to make appropriate curriculum and course changes when needed. Faculty can also continue to refine appropriate assessments for student learning outcomes and establish relevant criteria for success.

e. Recommended program's challenges and potential resources needed to address them.

One of our future challenges is clearly going to be the increasing growth of our programs. Another future challenge will be the planning and implementation of graduate programs in our department.

APPENDICES

APPENDIX A – Program Sheets

(BAH - Adapted Physical Education – Fitness & Health Promotion – K-12 Teaching and Personal Training Minor)



Kinesiology Program
Sheets -BAH Ad PE

APPENDIX B – Brochures

Department of Kinesiology & Monfort Family Human Performance Laboratory Brochures



KINE & HPL
Brochures.pdf

APPENDIX C – Faculty Vita's

Department of Kinesiology: Dr. Richard Bell, Dr. Jill Cordova, Dr. Keith Fritz, Dr. Kristin Heumann, Dr. Gig Leadbetter, Dr. Steven R. Murray, Robert Ryan, Dr. Elizabeth Sharp, and Dr. Gerald Smith



2012 Faculty
CVs.pdf

APPENDIX D – Library Assessment



Kinesiology 2012 -
Library Assessment.p

APPENDIX E - Curriculum Maps (Matrixes) for Student Learning Outcomes

Adapted Physical Education – Fitness & Health Promotion – K-12 Teaching



SLO Matrixs.pdf

APPENDIX F – Alumni Survey Letter



Alumni Ltr. pdf

APPENDIX G – Employer Survey Letter



Employer Survey
Letter.pdf

APPENDIX H – Assessment Plans and Reports



Program
Assessments - Kinesic

Appendix A



2012-2013 PETITION/PROGRAM SHEET

Degree: Bachelor of Arts

Major: Kinesiology

Concentration: Adapted Physical Education

About This Major ...

Students who select this major will learn to adapt or modify the physical education curriculum and/or instruction to address specific abilities of individuals. Students will learn to develop activities that are appropriate and effective for persons with disabilities. Career opportunities include: adapted physical education teacher (K-12) which requires completing the K-12 concentration coursework; activity director at an assisted living center or rehabilitation facility; physical therapist*; occupational therapist*. Colorado Mesa students frequently continue their study towards graduate or professional degrees at other universities.

For more information on what you can do with this major, go to <http://www.coloradomesa.edu/career/whatmajor.html>.

*Career requires additional post-baccalaureate studies.

POLICIES:

1. It is your responsibility to determine whether you have met the requirements for your degree. Please see the catalog for a complete list of graduation requirements.
2. You must turn in your "Intent to Graduate" form to the Registrar's Office by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December.
3. This program sheet must be submitted with your graduation planning sheet to your advisor during the semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.
4. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature.
5. Finally, the Department Head or the department administrative assistant will take the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
6. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
7. NOTE: The semester before graduation, you will be required to take a Major Field Achievement Test (exit exam).

NAME: _____ STUDENT ID # _____

LOCAL ADDRESS AND PHONE NUMBER: _____

_____ () _____

I, (Signature) _____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

Signature of Advisor

Date

20

Signature of Department Head

Date

20

Signature of Registrar

Date

20

Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration.

Degree Requirements:

- 120 semester hours total (A minimum of 28 taken at CMU in no fewer than two semesters).
- 40 upper division credits (A minimum of 15 taken at the 300-400 course levels within the major at CMU).
- 2.00 cumulative GPA or higher in all CMU coursework
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- When filling out the program sheet a course can be used only once.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.
- See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information.

GENERAL EDUCATION REQUIREMENTS (31 semester hours)

See the current catalog for a list of courses that fulfill the requirements below. If a course is on the general education list of options and a requirement for your major, you must use it to fulfill the major requirement and make a different selection within the general education requirement.

Course No Title	Sem.hrs	Grade	Term/Tms
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English(6 semester hours, must receive a grade of "C" or better and must be completed by the time the student has 60 semester hours.)

ENGL 111 English Composition	3		
ENGL 112 English Composition	3		

Math: MATH 110 or higher (3 semester hours, must receive a grade of "C" or better, must be completed by the time the student has 60 semester hours.)

MATH 1			
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Humanities (3 semester hours)

Social and Behavioral Sciences (6 semester hours)

Natural Sciences (7 semester hours, one course must include a lab)

History(3 semester hours)

HIST			
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Fine Arts (3 semester hours)

Course No Title	Sem.hrs	Grade	Term/Tms
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OTHER LOWER DIVISION REQUIREMENTS(6 semester hours)

Kinesiology (3 semester hours)

KINE 100 Health and Wellness	1		
KINA 1	1		
KINA 1	1		

Applied Studies (3 semester hours)

FOUNDATION COURSES (4 semester hours)

BIOL209 Human Anatomy and Physiology	3		
BIOL209L Human Anatomy and Physiology Lab	1		

KINESIOLOGY MAJOR – ADAPTED PHYSICAL EDUCATION CONCENTRATION REQUIREMENTS

(54-57 semester hours) For students taking classes prior to Summer 2006, these classes were taught under the HPWA prefix.

Required Core Courses (18-21 semester hours)

KINE200 History & Philosophy of Sport & Physical Education	3		
KINE213 Applications of Physical Fitness & Exercise Prescription	3		
KINE303 Exercise Physiology	3		
KINE303L Exercise Physiology Lab	1		
KINE309 Anatomical Kinesiology	3		
KINE309L Anatomical Kinesiology Lab	1		
KINE401 Org/Ad/Legal Considerations of PE and Sports	3		
KINE494 Senior Seminar (Capstone)	1		

Student must have current First Aid/CPR or take one of the following:

Current CPR Card? Yes / No (If yes, provide a copy of the card.)

Or take one of the following: KINE 265 or KINE 250

KINE	3		
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Required Concentration Courses (36 semester hours)

FLSL 111 American Sign Language I	3		
FLSL 112 American Sign Language II	3		
PSYC 340 Abnormal Psychology	3		
KINE211 Methods of Lifetime, Individual & Dual Activities	3		
KINE251 Water Safety Instructor	3		
KINE301 Health and Fitness Assessment	3		
KINE360 Motor Learning	3		
KINE415 Physical Activity & Aging	3		
KINE480 Inclusive Physical Activity	3		
KINE499 Internship	6		

One course selected from PSYC 233, PSYC 310, PSYC 330, PSYC 350 or KINE 234

	3		
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Course No	Title	Sem.hrs	Grade	Term/Tms
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Electives (All college level courses appearing on your final transcript, not listed above that will bring your total hours to 120 hours.) (22-25 semester hours; 4-7 additional upper division hours are needed.)

Course No	Title	Sem.hrs	Grade	Term/Tms
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SUGGESTED COURSE SEQUENCING FOR A MAJOR IN KINESIOLOGY – ADAPTED PHYSICAL EDUCATION

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Colorado Mesa website for course availability.

FRESHMAN YEAR

Fall Semester	Hours	Spring Semester	Hours
ENGL 111 English Composition	3	ENGL 112 English Composition	3
KINE 100 Health and Wellness	1	BIOL 209 Human Anatomy and Physiology	3
KINE 200 History and Phil. of Sport & PE	3	BIOL 209L Human Anatomy and Physiology Lab	1
General Education Fine Arts	3	KINE 213 Appl. Of Phys. Fitness and Ex. Presc.	3
General Education Natural Science	3	MATH 110 or higher	3
General Education Humanities	3	General Education Applied Studies	3
	16		16

SOPHOMORE YEAR

Fall Semester	Hours	Spring Semester	Hours
KINE 211 Methods of Lifetime, Individual & Dual Activities	3	General Education History	3
FLSL 111 American Sign Language I	3	General Education Social/Behavioral Science	3
General Education Natural Science with Lab	4	FLSL 112 American Sign Language II	3
General Education Social/Behavioral Science	3	KINA Activities (2 courses)	2
Electives	3	*KINE 250 Lifeguard Training OR	
	16	*KINE 265 First Aid & CPR for the Prof Res	3
		ELECTIVES	3

14-17

*First Aid/CPR Certification required.

JUNIOR YEAR

Fall Semester	Hours	Spring Semester	Hours
KINE 309 Anatomical Kinesiology	3	KINE 301 Health and Fitness Assessment	3
KINE 309L Anatomical Kinesiology Lab	1	KINE 415 Physical Activity and Aging	3
KINE 360 Motor Learning	3	KINE 480 Inclusive Physical Activity	3
KINE 303 Exercise Physiology	3	KINE 251 Water Safety Instructor	3
KINE 303L Exercise Physiology Lab	1	Electives	3
Electives (if needed)	3		15
Electives or Minor	3		
	14-17		

SENIOR YEAR

Fall Semester	Hours	Spring Semester	Hours
PSYC 340 Abnormal Psychology	3	KINE 494 Senior Seminar	1
KINE 401 Org/Ad/Legal	3	KINE 499 Internship	6
PSYC or KINE option	3	Electives	7
Elective or Minor	3		14
	12		



2012-2013 PETITION/PROGRAM SHEET

Degree: Bachelor of Arts

Major: Kinesiology

Concentration: K-12 Teaching

About This Major . . .

Students will be prepared to teach elementary, middle, and high school physical education. The degree plan includes coursework covering human anatomy and physiology, team and individual sports, exercise science, and teaching methods courses. Students will gradually accumulate over 200 hours of classroom experience before beginning student teaching. School districts throughout Western Colorado provide opportunities to gain experience with children of all ages and backgrounds in a variety of school settings.

Before being admitted into the Teacher Education program, the following courses must be completed with a grade of B or better: ENGL 111, ENGL 112, SPCH 102, PSYC 233, and EDUC 211. (English honors may be substituted for ENGL 111 and 112.) A grade of C or better is required for MATH 110. Also, a minimum cumulative GPA of 2.8 (including transfer and CMU coursework) is required of all students for admission into the program.

For more information on what you can do with this major, go to <http://www.coloradomesa.edu/career/whatmajor.html>.

POLICIES:

1. It is your responsibility to determine whether you have met the requirements for your degree. Please see the catalog for a complete list of graduation requirements.
2. You must turn in your "Intent to Graduate" form to the Registrar's Office by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December.
3. This program sheet must be submitted with your graduation planning sheet to your advisor during the semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.
4. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature.
5. Finally, the Department Head or the department administrative assistant will take the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
6. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
7. NOTE: The semester before graduation, you may be required to take a Major Field Achievement Test (exit exam).

NAME: _____ STUDENT ID # _____

LOCAL ADDRESS AND PHONE NUMBER: _____

_____ () _____

I, (Signature) _____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

Signature of Advisor _____ Date _____ 20__

Signature of Content Advisor _____ Date _____ 20__

Signature of Department Head _____ Date _____ 20__

Signature of Registrar _____ Date _____ 20__

Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration.

Degree Requirements:

- 120 semester hours total (A minimum of 28 taken at CMU in no fewer than two semesters).
- 40 upper division credits (A minimum of 15 taken at the 300-400 course levels within the major at CMU).
- 2.80 cumulative GPA or higher in all CMU coursework
- 2.80 cumulative GPA or higher in coursework toward the major content area
- A cumulative grade point average of 2.8 or higher must be maintained for each of 3 areas: content courses, education courses and overall GPA.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- When filling out the program sheet a course can be used only once.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.
- See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information.
- Students must PASS the PLACE exam in the content area prior to commencing the internship. Also, ALL other coursework toward the degree must be successfully completed prior to the internship.

GENERAL EDUCATION REQUIREMENTS (31 semester hours)

See the current catalog for a list of courses that fulfill the requirements below. If a course is on the general education list of options and a requirement for your major, you must use it to fulfill the major requirement and make a different selection within the general education requirement.

Course No	Title	Sem.hrs	Grade	Term
English (6 semester hours, must receive a grade of "B" or better and must be completed by the time the student has 60 semester hours.)				
ENGL 111	English Composition	3		
ENGL 112	English Composition	3		

Math: MATH 110 or higher (3 semester hours, must receive a grade of "C" or better, must be completed by the time the student has 60 semester hours.)

MATH 1 _____

Humanities (3 semester hours)

Social and Behavioral Sciences (6 semester hours)

PSYC233 Human Growth & Development 3 _____
(must receive a grade of "B" or better)

Natural Sciences (7 semester hours, one course must include alab)

Course No Title Sem.hrs Grade Term

Fine Arts (3 semester hours)

OTHER LOWER DIVISION REQUIREMENTS (6 semester hours)

Kinesiology (3 semester hours)

KINE 100	Health and Wellness	1		
KINA 1		1		
KINA 1		1		

Applied Studies (3 semester hours)

*SPCH102	Speechmaking	3		
*Must earn a "B" or higher				

FOUNDATION COURSES(4-7 semester hours)

BIOL209	Human Anatomy and Physiology	3		
BIOL209L	Human Anatomy and Physiology Lab	1		

Student must have current First Aid/CPR or take one of the following:

Current CPR Card? Yes / No (If yes, provide a copy of the card.)

Or take one of the following: KINE 265 or KINE 250

KINE		3		
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KINESIOLOGY MAJOR – LEADING TO K-12

CONCENTRATION & LICENSURE REQUIREMENTS(55-57 semester hours) For students taking classes prior to Summer 2006, KINE classes were taught under the HPWA prefix.

Required Core Courses (18 semester hours)

KINE200	Hist. & Philosophy of Sport & Physical Education	3		
KINE213	Applications of Physical Fitness & Exercise Prescription	3		
KINE303	Exercise Physiology	3		
KINE303L	Exercise Physiology Lab	1		
KINE309	Anatomical Kinesiology	3		
KINE309L	Anatomical Kinesiology Lab	1		
KINE401	Org./Ad./Legal Considerations of PE and Sports	3		
KINE494	Senior Seminar (Capstone)	1		

Required Concentration Courses (37-39 Semester Hours)

KINE211	Methods of Lifetime, Individual & Dual Activities	3		
KINE214	Methods of Team Activities	3		
KINE220	Methods of Dance and Gymnastics	3		
KINE234	Prevention & Care of Athletic Injuries	3		
KINE256	Creative Play and Literacy	3		
KINE260	School Health Education	3		
KINE301	Health and Fitness Assessment	3		
KINE320	Methods of Teaching Elementary PE	3		

Course No	Title	Sem Hrs	Grade	Term
KINE360	Motor Learning	3	_____	_____
KINE 480	Inclusive Physical Activity	3	_____	_____
KINE408	Methods of Teaching Secondary PE	3	_____	_____
KINE497	Pre-Internship in Physical Education	3	_____	_____
One course selected from KINA101 or KINA102 or KINE 251				
KINA 101	Beginning Swimming	1	_____	_____
KINA 102	Intermediate Swimming	1	_____	_____
KINE 251	Water Safety Instructor Course	3	_____	_____

Course No	Title	Sem Hrs	Grade	Term
Electives (All college level courses appearing on your final transcript, not listed above that will bring your total semester hours to 120 hours.) 0-4 semester hours.				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

K-12 Licensure Requirements (20 Semester Hours)

*Prerequisites: ENGL 111 & 112 (or ENGL 129), SPCH 102, PSYC 233, EDUC 211 (All with grade of "B" or higher) and MATH 110 or higher (with grade of "C" or higher) and formal acceptance to the Teacher Education Program

Course No	Title	Sem.hrs	Grade	Term	
EDUC211	Foundations of Education	2	_____	_____	20 Field Experience Hours
EDUC342*	Pedagogy & Assessment: Secondary/K-12	3	_____	_____	20 Field Experience Hours
EDUC343*	Teaching to Diversity	3	_____	_____	20 Field Experience Hours
EDUC499D*	Teaching Internship/Colloq.: Elementary	6	_____	_____	300 Field Experience Hours
EDUC499H*	Teaching Internship/Colloq.: Secondary	6	_____	_____	300 Field Experience Hours

****All EDUC prefix courses listed above must be completed with a grade of B or better to progress through the program sequence.**

SUGGESTED COURSE SEQUENCING FOR A MAJOR IN KINESIOLOGY – LEADING TO K-12 TEACHER LICENSURE

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Colorado Mesa website for course availability.

FRESHMAN YEAR

Fall Semester		Hours	Spring Semester		Hours
ENGL 111	English Composition	3	ENGL 112	English Composition	3
KINE 100	Health and Wellness	1	KINE 213	Appl. Phys. Fit & Exercise Prescription	3
KINE 200	Hist./Phil. Human Performance	3	BIOL 209	Human Anatomy and Physiology	3
General Education	History	3	BIOL 209L	Human Anatomy and Physiology Lab	1
General Education	Natural Science	3	Math 110 or higher	Math Requirement	3
General Education	Fine Arts	3	SPCH 102	Speechmaking	3
		16			16

SOPHOMORE YEAR

Fall Semester		Hours	Spring Semester		Hours
KINE 211	Methods of Lifetime, Individual & Dual Activities	3	KINE 260	School Health Education	3
General Education	Social/Behavioral Science	3	General Education	Humanities	3
			*EDUC 211	Foundations of Education	2
General Education	Natural Science with lab	4	KINA	Activity	1
PSYC 233	Human Growth and Development	3	KINE 220	Methods of Dance & Gymnastics	3
KINE 234	Prevention/Care of Athletic Injuries	3	**KINE 250	Lifeguard Training	3
		16	OR **KINE 265	First Aid and CPR for the Prof Rescuer	3
			Electives (if needed)		1
					12-16

*Must be taken prior to acceptance into the Teacher Education Program. Offered in summer, fall and spring semesters.

**Must take KINE 250 or KINE 265 - If no current First Aid/CPR Certification

JUNIOR YEAR

Fall Semester		Hours	Spring Semester		Hours
KINE 309	Anatomical Kinesiology	3	KINE 256	Creative Play/Literacy	3
KINE 309L	Anatomical Kinesiology Lab	1	KINE 214	Methods of Team Activities	3
KINE 320	Elementary School P.E.	3	EDUC 343	Teaching to Diversity	3
KINE 360	Motor Learning	3	EDUC 342	Ped. and Assess.: Secondary and K-12	3
KINE 401	Org/Ad/Legal Consid in P.E.	3	KINA	Activity	1
KINE 301	Health and Fitness Assessment	3	KINE 251	Water Safety Instructor	3
		16	or KINA 101	Beginning Swimming	1
			or KINA 102	Intermediate Swimming	1
					14-16

SENIOR YEAR

Fall Semester		Hours	Spring Semester		Hours
KINE 303	Exercise Physiology AND	3	EDUC 499D	Teaching Internship/Colloq.:Elementary	6
KINE 303L	Exercise Physiology Lab	1	EDUC 499H	Teaching Internship/Colloq.:Secondary	6
KINE 480	Inclusive Physical Activity	3			12
KINE 408	Methods Teaching Secondary	3			
KINE 494	Senior Seminar	1			
KINE 497	Pre-Internship	3			
Electives (if needed)		3			
		14-17			



2012-2013 PETITION/PROGRAM SHEET
Degree: Bachelor of Arts
Major: Kinesiology
Concentration: Fitness and Health Promotion

About This Major . . .

Students enrolled in this concentration should have a strong interest in the sciences as this program applies science to human function. The student will explore exercise physiology, anatomical kinesiology, community health, physical activity and aging, worksite health promotion, and sports nutrition, among other subject areas. Career opportunities include: sports and wellness program instructors and directors; strength coaches for college, university and professional sports* programs; managers and exercise leaders in corporate wellness programs; nutritionist*; occupational therapist*; and personal trainer.

*Career requires additional post-baccalaureate studies.

Colorado Mesa students frequently continue their study for graduate or professional degrees at universities widely recognized as top programs in exercise physiology, occupational therapy, physical education and public health.

For more information on what you can do with this major, go to <http://www.coloradomesa.edu/career/whatmajor.html>.

POLICIES:

1. It is your responsibility to determine whether you have met the requirements for your degree. Please see the catalog for a complete list of graduation requirements.
2. You must turn in your "Intent to Graduate" form to the Registrar's Office by **September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December.**
3. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.**
4. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature.
5. Finally, the Department Head or the department administrative assistant will take the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
6. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
7. NOTE: The semester before graduation, you will be required to take a Major Field Achievement Test (exit exam).

NAME: _____ STUDENT ID # _____

LOCAL ADDRESS AND PHONE NUMBER: _____

_____ () _____

I, (Signature) _____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

Signature of Advisor _____ Date _____ 20

Signature of Department Head _____ Date _____ 20

Signature of Registrar _____ Date _____ 20

Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration.

Degree Requirements:

- 120 semester hours total (A minimum of 28 taken at CMU in no fewer than two semesters).
- 40 upper division credits (A minimum of 15 taken at the 300-400 course levels within the major at CMU).
- 2.00 cumulative GPA or higher in all CMU coursework
- 2.00 cumulative GPA or higher in coursework toward the major content area
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.
- When filling out the program sheet a course can be used only once.
- See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information.

GENERAL EDUCATION REQUIREMENTS (31 semester hours)

See the current catalog for a list of courses that fulfill the requirements below. If a course is on the general education list of options and a requirement for your major, you must use it to fulfill the major requirement and make a different selection within the general education requirement.

Course No	Title	Sem.hrs	Grade	Term/Tms
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English(6 semester hours, must receive a grade of "C" or better and must be completed by the time the student has 60 semester hours.)

ENGL 111	English Composition	3		
ENGL 112	English Composition	3		

Math: MATH 110 or higher (3 semester hours, must receive a grade of "C" or better, must be completed by the time the student has 60 semester hours.)

MATH 1				
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Humanities (3 semester hours)

Social and Behavioral Sciences (6 semester hours)

Natural Sciences (7 semester hours, one course must include alab)

History(3 semester hours)

HIST				
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Fine Arts (3 semester hours)

Course No	Title	Sem.hrs	Grade	Term/Tms
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OTHER LOWER DIVISION REQUIREMENTS(6 semester hours)

Kinesiology (3 semester hours)

KINE 100	Health and Wellness	1		
KINA 1		1		
KINA 1		1		

Applied Studies (3 semester hours)

FOUNDATION COURSES (7 semester hours)

BIOL 203	Human Nutrition	3		
BIOL209	Human Anat and Physiology	3		
BIOL209L	Human Anat & Physiology Lab	1		

KINESIOLOGY MAJOR – FITNESS & HEALTH PROMOTION CONCENTRATION REQUIREMENTS

(56-60semester hours)

Required CoreCourses(18-21 semester hours)

KINE200	History & Philosophy of Sport & Physical Education	3		
KINE213	Applications of Physical Fitness and Exercise Prescription	3		
KINE303	Exercise Physiology	3		
KINE303L	Exercise Physiology Lab	1		
KINE309	Anatomical Kinesiology	3		
KINE309L	Anatomical Kinesiology Lab	1		
KINE401	Org/Ad/Legal Considerations of PE and Sports	3		
KINE494	Senior Seminar (Capstone)	1		

Student must have current First Aid/CPR or take one of the following:

Current CPR Card?Yes / No (If yes, provide a copy of the card.)

Or take one of the following: KINE 265 or KINE 250

KINE		3		
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Required Concentration Courses (38-39 Semester Hours)

KINE234	Prevention and Care of Athletic Injuries	3		
KINE 260	School Health Education	3		
KINE297	Practicum	2		
KINE301	Health and Fitness Assessment	3		
KINE 333	Community Health	3		
KINE405	Sports Nutrition	3		
KINE 411	Worksite Health Promotion	3		
KINE 415	Physical Activity & Aging	3		
KINE 480	Inclusive Physical Activity	3		
KINE499	Internship	6		

Course No	Title	Sem.hrs	Grade	Term/Tms
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Select two courses from the list below Courses with a lecture and lab are counted as one course. (6-7 Semester Hours)

RESTRICTED ELECTIVES:

BIOL 315 Epidemiology
 KINE 370 & 370L Biomechanics (3) / Lab (1)
 KINE 403 Advanced Strength and Conditioning (3)
 KINE 404 Clinical Exercise Physiology and Advanced Exercise Prescription (3)
 KINE 430 Medical Conditions and Pharmacology in Sports (3)
 KINE 487 Structured Research (3)
 KINE 396 or KINE 496 Topics (1-3)
 PSYC 401 Sport Psychology

Course No	Title	Sem.hrs	Grade	Term/Tms
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Electives(All college level courses appearing on your final transcript, not listed above that will bring your total semester hours to 120 hours.) (16-20) semester hours.)

SUGGESTED COURSE SEQUENCING FOR A MAJOR IN KINESIOLOGY – FITNESS AND HEALTH PROMOTION

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Colorado Mesa website for course availability.

FRESHMAN YEAR

Fall Semester		Hours	Spring Semester		Hours
ENGL 111	English Composition	3	ENGL 112	English Composition	3
KINE 100	Health and Wellness	1	KINE 213	Appl. Of Phys. Fitness and Ex. Presc.	3
KINE 200	History and Phil. of Sport & PE	3	MATH 110 or higher		3
General Education History		3	General Education Applied Studies		3
General Education Fine Arts		3	BIOL 209	Human Anatomy and Physiology	3
General Education Natural Science		<u>3</u>	BIOL 209L	Human Anatomy and Physiology Lab	<u>1</u>
		16			16

SOPHOMORE YEAR

Fall Semester		Hours	Spring Semester		Hours
KINE 234	Prevention and Care of Athletic Injuries	3	General Education Social/Behavioral Science		3
KINE 260	School Health Education	3	BIOL 203	Human Nutrition	3
General Education Natural Science with Lab		4	KINA XXX	Activity	1
General Education Humanities		3	*KINE 265	First Aid & CPR for the Prof Rescuer	3
General Education Social/Behavioral Science		<u>3</u>	OR		
		16	*KINE 250	Lifeguard Training	3
			KINE 297	Practicum	2
			Electives		<u>3</u>
					12-15
			*KINE 250 OR KINE 265 - If no current First aid/CPR Certification		

JUNIOR YEAR

Fall Semester		Hours	Spring Semester		Hours
KINE 301	Health and Fitness Assessment	3	KINE 303	Exercise Physiology	3
KINE 309	Anatomical Kinesiology	3	KINE 303L	Exercise Physiology Lab	1
KINE 309L	Anatomical Kinesiology Lab	1	KINE 415	Physical Activity & Aging	3
KINE 333	Community Health	3	KINE Option		3-4
KINA XXX	Activity	1	Electives or Minor		3
Electives or Minor		<u>5</u>	KINE 411	Worksite Health Promotion	<u>3</u>
		16			16-17

SENIOR YEAR

Fall Semester		Hours	Spring Semester		Hours
KINE 401	Org/Ad/Legal of PE/Sport	3	KINE 494	Senior Seminar	1
KINE 405	Sports Nutrition	3	KINE	Option	3-4
KINE 480	Inclusive Physical Activity	3	KINE 499	Internship	6
Electives		<u>3</u>	Elective or Minor		<u>2-6</u>
		12			12-17

NOTE: 120 credit hours are required for graduation



2012-2013 PETITION/PROGRAM SHEET

Minor: Personal Training

About This Minor . . .

Students enrolled in the Personal Training minor should have a strong interest in fitness, health promotion, and personal training. Students will engage in practical experiences that will help them with the possibility of a future career in personal training. Students will explore subject areas that include: anatomy, physiology, kinesiology, applications of physical fitness, and exercise physiology.

POLICIES:

1. It is your responsibility to determine whether you have met the requirements for your degree. Please see the catalog for a complete list of graduation requirements.
2. You must turn in your "Intent to Graduate" form to the Registrar's Office by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December.
3. This program sheet must be submitted with your graduation planning sheet to your advisor during the semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.
4. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature.
5. Finally, the Department Head or the department administrative assistant will take the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
6. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
7. NOTE: The semester before graduation, you may be required to take a Major Field Achievement Test (exit exam).

NAME: _____ STUDENT ID # _____

LOCAL ADDRESS AND PHONE NUMBER: _____

_____ () _____

I, (Signature) _____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

Signature of Personal Training Advisor

Date

20

Signature of Department Head

Date

20

Signature of Registrar

Date

20

Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration. See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information.

Minor Requirements:

- At least 33 percent of the credit hours required for the minor must be in courses numbered 300 or above.
- 2.00 cumulative GPA or higher in the minor is required
- The number of minors a student may receive at Colorado Mesa University shall not exceed two.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.

REQUIRED COURSES (23 Semester Hours)

See the current catalog for a list of courses that fulfill the requirements below.

Course No	Title	Sem.hrs	Grade	Term/Tms
BIOL 209	Human Anat & Physiology	3		
BIOL 209L	Human Anat & Physiology Lab	1		
KINE 213	Applications of Physical Fitness & Exercise Prescription	3		
KINE 234	Prevention & Care of Athletic Injuries	3		

Course No	Title	Sem.hrs	Grade	Term/Tms
KINE 297	Practicum	2		
KINE 303	Physiology of Exercise	3		
KINE 303L	Physiology of Exercise Lab	1		
KINE 309	Anatomical Kinesiology	3		
KINE 309L	Anatomical Kinesiology Lab	1		
KINE 405	Sports Nutrition	3		

Student must have current First Aid/CPR or take one of the following:

Current CPR Card? Yes / No (If yes, provide a copy of the card.)

Or take one of the following: KINE 265 or KINE 250

KINE _____ 3 _____

Appendix B

Monfort Family Human Performance Lab

The Monfort Family Human Performance Laboratory is one of the most technologically advanced facilities for applied physiological and biomechanical research west of the Mississippi River. The lab offers a myriad of services for community members, athletes, students, and faculty. It provides Colorado Mesa University the opportunity to affect the health and athletic performance of the region. This integrative, multi-use human performance laboratory fills a need in the community by providing advanced physiological, biomechanical, performance, and wellness testing.

Contact the Monfort Family Human Performance Lab
ph: 970.248.1935



The Department of Kinesiology is housed in Saunders Field House in The Maverick Center, which was recently expanded to include new classrooms, laboratories and the state-of-the-art Monfort Family Human Performance Laboratory.



Department of Kinesiology



1100 North Avenue • Grand Junction, CO 81501-3122

Department:
970.248-1635

Website:
coloradomesa.edu/kinesiology

Jill Cordova, Ph.D.
Professor of Kinesiology, Department Head
970.248.1715 • jcordova@coloradomesa.edu

Brent Alumbaugh, MS, CSCS
Acting Clinical Coordinator/Lab Assistant
970.248.1346 • balumbau@coloradomesa.edu

Richard Bell, Ph.D.
Instructor of Kinesiology, Sport Management Program Coordinator
970.248.1158 • rbell@coloradomesa.edu

Tina David
Administrative Assistant
970.248.1635 • tdavid@coloradomesa.edu

Keith Fritz, Ph.D.
Associate Professor of Kinesiology
970.248.1060 • kfritz@coloradomesa.edu

Geana Gaasch, MS, ATC
Athletic Training Education Program Clinical Coordinator
Instructor of Kinesiology
970.248.1356 • ggaasch@coloradomesa.edu

Kristin Heumann, Ph.D., HFS
Assistant Professor of Kinesiology
970.248.1763 • kheumann@coloradomesa.edu

Gig Leadbetter, Ph.D.
Professor of Kinesiology
970.248.1194 • gleadbet@coloradomesa.edu

Steven Ross Murray, D.A.
Professor of Kinesiology
970.248.1158 • smurray@coloradomesa.edu

Robert Ryan, MA, ATC, CSCS
Assistant Professor of Kinesiology
Athletic Training Curriculum Director
970.248.1374 • rryan@coloradomesa.edu

Elizabeth Sharp, Ph.D.
Assistant Professor of Kinesiology
970.248.1245 • esharp@coloradomesa.edu

Gerald A. Smith, Ph.D.
Director - Monfort Family Human Performance Lab
970.248.1918 • geasmith@coloradomesa.edu



BACHELOR OF ARTS - KINESIOLOGY

Concentration Choices:

**ADAPTED PHYSICAL EDUCATION
FITNESS and HEALTH PROMOTION
K-12 EDUCATION**

BACHELOR OF SCIENCE

Majors:

**ATHLETIC TRAINING
EXERCISE SCIENCE
SPORT MANAGEMENT**

ASSOCIATE OF SCIENCE

SPORT MANAGEMENT

MINORS

**PERSONAL TRAINING
SPORT MANAGEMENT**

DEPARTMENT OF KINESIOLOGY
coloradomesa.edu/kinesiology

Bachelors of Arts - Kinesiology Concentrations

ADAPTED PHYSICAL EDUCATION

Students who select this concentration will learn to adapt or modify the physical education curriculum and instruction to address the specific abilities of individuals. Students will learn to develop activities that are appropriate and effective for persons with disabilities. Students will participate in Adapted Physical Education related field experiences.

Career Opportunities:*

- Adapted Physical Education Teacher, (K-12). This requires completing the K-12 concentration coursework
- Activity Director at an Assisted Living Center or Rehabilitation Facility
- Physical Therapist
- Occupational Therapist

FITNESS and HEALTH PROMOTION

Students enrolled in this concentration should have a strong interest in the fields of fitness and health promotion. Students will explore the anatomy and physiology of exercise, community health, physical activity and aging, health promotion at the worksite, and sport nutrition, among other subject areas.

Colorado Mesa University students frequently continue their studies in graduate programs at universities widely recognized as top programs in health promotion, public health, and strength and conditioning.

Career Opportunities:*

- Sport and Wellness Program Instructors and Directors
- Strength Coaches for College, University and Professional Sports programs
- Managers and Exercise Leaders in Corporate Wellness Programs
- Nutritionist
- Occupational Therapist
- Personal Trainer

*Careers may require additional post-baccalaureate studies

K-12 EDUCATION

In this concentration the student prepares to become a K-12 Physical Education teacher. Students enrolled in this degree program also must be enrolled in the teacher licensure program which offers an innovative, holistic program of study that leads to a K-12 licensure in Colorado. Students who select this major will accumulate over 200 hours of classroom experience before beginning student teaching. The K-12 Education is currently accredited with National Association for Sport and Physical Education (NASPE) and The National Council for Accreditation of Teacher Education (NCATE).

Career Opportunities:*

- Physical Education Teacher (K-12)
- Coach
- Athletic Director

Bachelor of Science Degrees

ATHLETIC TRAINING

The Colorado Mesa University Athletic Training Education Program is fully accredited by the Commission on Accreditation of Athletic Training Education (CAATE). The two-year clinical program is usually completed during the junior and senior years and requires four semesters of on-site clinical experiences. Students must complete 20 hours per week of clinical experiences working with the CMU athletic teams and at nearby off-campus affiliate sites, which include high school athletic training settings, outpatient physical therapy clinics, emergency rooms, and several physicians' offices including general medicine and orthopedics.

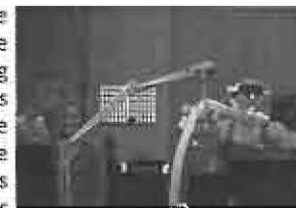


Career Opportunities:*

- High Schools
- Colleges and Universities
- Orthopedic Clinics
- Professional Sports
- Physical Therapy Clinics
- Various Wellness Programs

EXERCISE SCIENCE

Students choosing the Exercise Science degree should have a strong interest in the sciences, as this program applies science to human function. The student will begin studies with science courses such as physics, general chemistry, and human anatomy and physiology. Continued studies will include courses such as exercise physiology, anatomical kinesiology, biomechanics, physical activity and aging, medical conditions and pharmacology, and sport nutrition. This major prepares students for graduate school in exercise science, physical therapy, and occupational therapy.

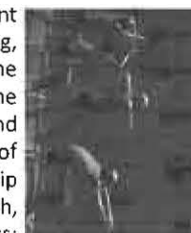


Career Opportunities:*

- Physical Therapist
- Physician Assistant
- Occupational Therapist
- Exercise Physiologist
- Cardiac Rehabilitation Specialist

SPORT MANAGEMENT

The discipline of sport management includes the planning, organizing, leading, and evaluating within the context of a sport organization. The program provides the theoretical and practical framework for a number of professions that focus on leadership roles, including the following: youth, amateur, and professional sports; recreational, college and university sports programs; and the marketing and management of all sport and fitness-related goods. Students will develop into competent leaders for the various professions that focus on sport and fitness. This major prepares students for graduate school in sport management or business administration.



Career Opportunities:*

- College and professional sport or athletic organizations
- Community recreation
- Sports facility management
- Public relations and marketing for college and professional sporting organizations

Monfort Family Human Performance Laboratory



The Monfort Family Human Performance Lab is one of the most technologically advanced facilities for applied physiological and biomechanical research in the inter-mountain west. The lab offers a myriad of services for the

community, athletes, students, and faculty. It provides Colorado Mesa University the opportunity to positively impact the health and athletic performance of residents in the region. This integrative, multi-use human performance laboratory fills a need in the community by providing advanced physiological, biomechanical, performance, and wellness testing.

The Monfort Family Human Performance Laboratory is located in The Maverick Center, on the Colorado Mesa University Campus.



Laboratory Information

- Individuals over 45 years of age or those having cardiovascular risk factors must have a physician present during any max VO_2 test (maximal metabolic test).
- Your physician or therapist should be contacted prior to assessments that involve injury.
- Children under 18 years of age require the permission of a parent or guardian to participate in assessments.
- Group and team rates apply. Please contact the laboratory for more information.



1100 North Avenue • Grand Junction, CO 81501-3122

Department:
970.248-1935

Website:
coloradomesa.edu/hpl

Brent Alumbaugh, MS, CSCS
Acting Clinical Coordinator/Lab Assistant
970.248.1346 • balumbau@coloradomesa.edu

Kristin Heumann, Ph.D., HFS
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970.248.1763 • kheumann@coloradomesa.edu

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Professor of Kinesiology
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Gerald A. Smith, Ph.D.
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*The Monfort Family
Human Performance Lab*



DEPARTMENT OF KINESIOLOGY
coloradomesa.edu/hpl



Body Composition Analysis

METABOLIC AND BIOMECHANICS TESTING

- **TRAINING PROGRAM DESIGN:** Development of season and year-long training plans including: periodization, training loads, recovery, peak phases, etc. Sound planning—the link between intelligent preparation and stable performance.
- **THERMAL IMAGING:** Thermal (infrared) imaging of body heat is used to discern inflammation from training and/or injury. This method allows you to see your body's response to training in a new light.
- **GAIT ANALYSIS:** A variety of measurements using instrumentation including high-speed video, Vicon motion analysis, force plates and electromyography (EMG) are used to characterize locomotion. Do you have pain while running or walking? Is your running smooth and without unnecessary motion?
- **SPORT SKILL ANALYSIS:** Measurements from high speed video, Vicon motion analysis, force plates, EMG and other instrumentation can help tune technique. Do you have technique deficiencies or idiosyncrasies? We can help improve sports technique.
- **AEROBIC TESTING:** Endurance and cardiovascular information. What is your VO_2 max? What is your lactate turn-point? What fuels do you use? How does your heart respond? What intensity is best for your training? Testing can include walking, running, biking or skating on an oversized treadmill.

- **BODY COMPOSITION:** Measurement to determine how much muscle and bone (lean body mass) vs. body fat a person has. Body composition data are important in any weight loss program for determining status and progress.
- **RECOVERY ANALYSIS:** Are you getting enough rest? What are your sources of stress?
- **HYDRATION:** Are you dehydrated? This is one of the easiest aspects of training to neglect—but also easy to fix. Know your status.
- **STRENGTH AND POWER ASSESSMENT:** Tests using accelerometers, force plates and jump power analysis. How high do you jump? What is your strength, power and rates of force development? What are your agility, reaction, anaerobic power, sprint speed and acceleration measurements?
- **BLOOD PROFILES:** Measurements of cholesterol, lactate and glucose levels.



I think we view the Monfort Family Human Performance Lab as a great opportunity to bring athletes and non-athletes alike together in a setting that helps them best understand the human body, and how it functions!

Charles Monfort

Laboratory Fees

Training Design	
Lab	\$65
Thermal Imaging	
Camera/Lab	\$45
Gait Analysis (Lab)	
High-speed Video Qualitative, Thermal and Report	\$75
Optical Quantitative and Report	\$110
Force Platform and Report	\$40
EMG and Report	\$90
Sport Skill Analysis (Lab)	
High-speed Video Qualitative, Thermal and Report	\$75
Optical Quantitative and Report	\$110
Force Platform and Report	\$40
EMG and Report	\$90
Sport Skill Analysis (Field)	
High-Speed Video Qualitative and Report	\$120
Motus Quantitative and Report	\$220
Motus Quantitative + EMG and Report	\$300
Aerobic Physiology (Lab) **	
Treadmill, Ventilatory Threshold, Max VO_2 , Report	\$75
Treadmill, Lactate Threshold, Max VO_2 , Report	\$100
Bike, Ventilatory Threshold, Max VO_2 , Report	\$75
Bike, Lactate Threshold, Max VO_2 , Report	\$100
Health Assessment	
Full Health Assessment w/ VO_2 , EKG, Report	\$100
Full Health Assessment w/out VO_2 , Report	\$50
At Risk Exercise Tolerance (Lab)	
Treadmill, Metab, EKG, Report, Physician*	\$190
Bike, Metab, EKG, Report, Physician*	\$200
Exercise Induced Asthma (Lab)	
Treadmill, Spirometry, Report, Physician*	\$210
Bike, Spirometry, Report, Physician*	\$210
Body Composition	
Skinfolds and Bod Pod Report	\$40
Resting Metabolic Rate (Lab)	
Metabolic Cart, Treatment Table	\$70
Hydration	
Refractometer	\$17
Vertical Jump	
Vertec (height only) and Report	\$20
Vertical Jump Profile	
Force Platform, power, impulse, Report	\$70
Blood Profiles	\$115
Special Tests	
Modify, build, design equipment for test	As Needed
Body Composition	
Skinfolds and Report	\$20
X 2 (group or individual series of measurements)	\$30
X 4 (group or individual series of measurements)	\$40
Bod Pod: (progress report with series of measures)	\$45
X 2 (group or individual series of measurements)	\$60
X 4 (group or individual series of measurements)	\$100

* With physician, if required

** Series of tests over a season can be arranged at reduced cost.

Appendix C

RICHARD CLIFTON BELL
673 Gemstone Court #A, Grand Junction, CO 81505
970.248.1365 or 970.243.1244
rbell@coloradomesa.edu
CURRICULUM VITAE

EDUCATION

Doctor of Education, United States Sports Academy. Daphne, AL (Sport Management)
Juris Doctor, University of South Carolina. Columbia, SC
Master of Arts, The Citadel/College of Charleston. Charleston, SC (History)
Bachelor of Science, Clemson University. Clemson, SC

TEACHING EXPERIENCE

Colorado Mesa University

Director of Sport Management, Department of Kinesiology, Colorado Mesa University, Grand Junction, Colorado, Director of Sport Management program (2005-present)
Exemplary Faculty Award for Mesa State College, 2007

Courses Taught: (all courses taught have an online component)

Introduction to Sport Management	Sport Law and Risk Management
Leadership and Ethics in Sport	Sport Economics and Finance
Org./Admin./Legal Issues in Sport	Sport Psychology
Governance and Comm. in Sport	Sport Marketing
History and Philosophy in Sport	Sport Operations Management
Legal Environment of Business	Criminology
Facility/Equipment Management in Sport (Graduate)	
Event and Program Management in Sport (Graduate)	

Service:

Faculty Advisor to the Sport Management Student Association
Chair of the University Assessment Committee
Chair of the Educational Access Services Committee
Distance Learning and Technology Committee
Leadership Academy Committee

Columbia Southern University

Adjunct Professor, College of Business (2009-present)

Courses Taught:

Team Building and Leadership	Human Resource Management Methods
Negotiation/Conflict Resolution	Training and Development
Management Information Systems	Psychological Foundations of Leadership
Crisis Communication Management	Current Issues in Leadership
Sport Law and Risk Management	Sport Finance

Adjunct Professor, College of Arts and Sciences (2010-present)

History of Western Civilization 1 & 2	United States History 1 & 2
United States Military History 1 & 2	

Waldorf University

Adjunct Professor (2011-present)

Team Building and Leadership	Sport Financing	Negotiation and Conflict Res.
American History	Business Law	

Wichita State University

Assistant Professor, Department of Kinesiology and Sport Studies, Wichita State University, Wichita, Kansas, (2004-2005)

Courses Taught:

Sport Management and Leadership	Sport Law (graduate Level)
Legal Issues in the Profession	Introduction to Sport Management
Management of Sport Organizations (graduate level)	

Service:

Undergraduate Coordinator

Director of the Undergraduate Internship Program
Advisor for the Sport Administration Student Association

University of the Incarnate Word

Assistant Professor, Department of Nursing and Health Professions, University of the Incarnate Word, San Antonio, Texas, (2002-2004)

Courses Taught:

Introduction to Sport Management Sport Marketing
Sports Organizations Sport Law (graduate level)
Human Resources in Sport Management (graduate level)
Biomechanics in Sport (graduate level)

Service:

Advisor for *Phi Alpha Delta* student Pre-Law Association
Faculty Athletics Representative

Adjunct Professor, Universe Online, University of the Incarnate Word, San Antonio, Texas, (2003-present)

Courses Taught:

Business Law (graduate and undergraduate) Administrative Law (graduate)
Business Research and Design (graduate) Human Resource Mgmt (graduate)
Strategic Mgmt Concepts (graduate) Human Resource Law (undergrad)
Introduction to Corrections (undergrad) Criminal Law (undergraduate)
International Business Law (graduate and undergraduate)
Criminology Introduction to Criminal Justice

Assistant to the Vice President for Academic and Student Affairs, University of the Incarnate Word, San Antonio, Texas (2003-2004)

Conducted a University-wide assessment program for the National Survey of Student Engagement (NSSE) and the ETS Academic Profile.

United States Sports Academy

Chair of Sport Management, United States Sports Academy, Daphne, Alabama (2000-2002)

Courses Taught: (all are graduate level)

Contemporary Issues in Sport
Sport Administration and Finance
Sport Business and Personnel Management
Sport Law and Risk Management
Sport Marketing
Sport Communications
Ethics in Sport
Human Resource Management in Sport Administration

Interim Dean of Academic Affairs, United State Sports Academy, Daphne, Alabama (2002)

Editor of The Sport Journal, United States Sports Academy. (2001-2002) www.ussa.edu

University of Bahrain

Visiting Associate Professor, Department of Physical Education, University of Bahrain, Kingdom of Bahrain (2001)

Courses Taught:

Sport Marketing (graduate level)
Sport Communications (graduate level)

Trident Technical College

Adjunct Faculty, History Department, Trident Technical College, Charleston, South Carolina (1998-2000)

Courses Taught:

History of Western Civilization

MILITARY SERVICE

Naval Aviator, United States Navy. Viet Nam era veteran (1967-1979)

PUBLICATIONS

- Bell, R.C., Ratzlaff, S.E., & Murray, S.R. (2008). *The impact of the HIPAA privacy rule on collegiate sport professionals*. The Sport Journal, 11(2), Spring 2008
- Bell, R.C. (2007). *A history of women in sport prior to Title IX*. The Sport Journal, 10(2), Spring 2007.
- Bell, R. & Miller, L.K. (2006). *Legal and ethical considerations*. In Stoldt, C. & Dittmore, S. Sport Public Relations. Chicago: Human Kinetics Publishers.
- Henrich, T., Bell, R.C., Carleton, B., & Henrich, D. (2006). *Motivation, goals, and purposes of participation: antecedents to quality physical education programs*. Journal of ICHPER-SD, XLII(1), Winter 2006.
- Bell, R.C. & Chang, C-M (2002). *The exploration of the effect of Taekwondo training on personality traits*. The Sport Journal, 5(3), Fall 2002.
- Hsu, C-H, Bell, R.C. & Cheng, K-M (2002). *Transformational leadership and organizational effectiveness in recreational sports/fitness programs*. The Sport Journal, 5(2), Summer 2002.
- Bell, R.C. & Chen, S. (2002). *A strength training program for the "Ya-Tung" women's basketball team of Taiwan*. The Sport Journal, 5(1), Spring 2002.
- Bell, R.C. (2001). *Risk management is important to sport/recreational managers*. The Sport Supplement, 9(4).
- Bell, R.C. (2001). *People skills and the art of communication*, News and Views, 45, University of Bahrain.
- Bell, R.C. (2000). *A modern perspective of the ancient Olympic events*. The Sport Journal, 4(1).
- Bell, R.C. (2000). *It's time to work together to stop doping in sports*. The Sport Journal, 4(2).

PRESENTATIONS

- Coach's Freedom of Expression/Religion, Sport and Recreation Law Association, 2011 SRLA Conference, Savannah, GA. March 2011
- Sport Finance, National Association of Senior Games annual meeting, Las Vegas, Jan. 2011
- Workshop on Sport Business and Personnel Management, Sports Authority of Thailand, Bangkok, June 2010
- Preparing and Teaching a Sport Law Course Online, Sport and Recreation Law Association, 2009 SRLA Conference, Albuquerque, NM. March 2009
- Sport Management in the 21st Century, Invited lecturer. Doctoral class of Chandrakansem Rajabhat University, Thailand. June 2008
- Offering a Distance Education Sport Law Course: Suggestions for Success, Sport and Recreation Law Association, 2008 SRLA Conference, Myrtle Beach, SC. March 2008
- The History of Women in Sport Prior to Title IX, 2007 Summer Lecture Series, Gateway Canyons. May 2007
- Communication and People Skills, National Disabled Veterans Winter Sports Clinic, Snowmass, CO. April 2007.
- Courts v. Congress: Usurping Legislative Purpose, Sport and Recreation Law Association, 2007 SRLA Conference, Chapel Hill, NC. March 2007
- Sport Professional's HIPAA Considerations, AAHPERD National Convention, Salt Lake City, Utah. April 2006
- Legal Issues in Sport Public Relations, Sport and Recreation Law Association, 2006 SRLA Conference, Virginia Beach, Virginia. March 2006
- The Impact of the HIPAA Privacy Rule on Sport Professionals, Sport and Recreation Law Association, 2005 SRLA Conference, March 2005
- Current Implications of Title IX on Sport, Recreation and Physical Education Programs, Half Day Workshop. AAHPERD National Convention. Chicago, IL. April 2005
- The History of Women in Sport Prior to Title IX, Women in Sport Symposium, Bowling Green State University. February 2005
- Native American Influence on Sport in the United States, University of the Incarnate Word, November 2003
- Title IX. Its Current Status and A Look into the Future, Women's History Month at The University of the Incarnate Word. March, 2003.
- Historical Overview of American Indian History and Current Issues, Lecture and paper with Dr. Jonathan Hook for American Indian Heritage Month at The University of the Incarnate Word, November,

2002.

Title IX: A Thirty Year Perspective. Alabama State Association for Health, Physical Education, Recreation and Dance (ASAPHERD), Birmingham, Alabama, 2001

International Presentations and Workshops

Hong Kong Olympic Committee, Hong Kong PRC (2000)

Human Resource Management in Sport

Government Organization for Youth and Sport, Kingdom of Bahrain (2001-2011)

Human Resource Management in Sport (2005)

Sport Marketing in the 21 Century (2001)

Sport Administration (2005)

Sport Marketing (2006)

Sport Public Relations (2008, 2009)

Sport Business and Personnel Management (2010)

Sports Authority of Thailand, Bangkok, Thailand (2006-2011)

Sport Administration (2006, 2007, 2008, 2009)

Human Resource Management in Sport (2006)

Sport Business and Personnel Management (2010)

Technologies Unlimited & Dubai Sport Council, United Arab Emirates (2008)

Sport Public Relations in Abu Dhabi and Dubai (2008)

National Sport Institute of Malaysia (2010)

Sport Administration

PROFESSIONAL ORGANIZATIONS

Financial Officer for the Sport and Recreation Law Association (SRLA). 2008-2009

Sport Management Program Review Council (SMPRC). NASPE-NASSM Joint Task Force. (2005-2008)

College Sport Research Institute (CSRI)

North American Society for Sport Management (NASSM)

American Alliance of Health, Physical Education, Recreation and Dance (AAHPERD)

National Association of Sport and Physical Education (NASPE)

Alabama Council of Graduate Deans (2001-2002)

PROFESSIONAL CONSULTANT

EXSPORTISE LLC, Doha, Qatar.

Jill C. Cordova, Ph.D.
2663 I Road
Grand Junction, CO 81506
970-248-1715
jcordova@coloradomesa.edu

Educational Degrees:

- 1992 Ph.D. Health and Physical Education. *University of New Mexico, Albuquerque, NM.*
- 1985 M.A. Education. *Humboldt State University, Arcata, CA.*
- 1979 B.A. Health, Physical Education, and Recreation. *Humboldt State University, Arcata, CA.*

Professional Experience

- | | | |
|--------------|-----------------|--|
| 1992-Present | Professor | Department of Kinesiology, <i>Colorado Mesa University, Grand Junction, CO.</i> |
| 2007-Present | Department Head | Department of Kinesiology, <i>Colorado Mesa University, Grand Junction, CO.</i> |
| 1997-2003 | Department Head | Department of Kinesiology, <i>Colorado Mesa University, Grand Junction, CO.</i> |
| 1989-1992 | Instructor | Health and Wellness, <i>Albuquerque Technical Institute, Albuquerque, NM.</i> |
| 1989-1992 | Instructor | Health, and Physical Education, <i>University of New Mexico Albuquerque, NM.</i> |
| 1984-1989 | Instructor | Physical Education and Recreation, <i>Humboldt State University, Arcata, CA.</i> |
| 1983-1989 | Instructor | Physical Education. <i>College of the Redwoods, Eureka, CA.</i> |

Published Works

College students' attitudes toward physical education. *CAHPERD Journal*, Vol. 29, (1), Fall 2004, p. 7-9.

Changing attitudes toward people with disabilities. *Paleastra*, Vol. 18, (3), Spring 2002.

Successful pregnancy following diagnosis of hemochromatosis. *Canadian Hemochromatosis Society*. February 2002.

Cool runnings. *Paraplegia News*. Vol. 54, (9), 2000: pp. 14-17.

Colorado rafters challenge river and limitations. *Challenge*. Summer 2000, p. 10.

Accessing the Grand Canyon on the Rio Colorado. *Sports 'N Spokes*. May 2000, pp. 46-48.

Susceptibility to acute mountain sickness in spinal cord injured and amputee populations. Proceedings: *International Hypoxia Symposium*, 1999.

Detraining from total body exercise ergometry in individuals with spinal cord injury. *Spinal Cord*. Vol. 36, 1998: pp. 782-789.

The influence of the National Disabled Veterans' Winter Sports Clinic on the self-concept and leisure satisfaction of adult veterans with disabilities. *Paleastra*. Vol. 11, No. 1. 1998: pp. 40-43.

Psychological effects of CFES bicycle ergometry for individuals with spinal cord injuries. *Paleastra*. 11: (3) 46-51, 1995.

Book Review: A teacher's guide to including students with disabilities in regular physical education. *CAHPERD Journal*. 21: (2) 17, 1995.

Effects of electrical stimulation and upper body training after spinal cord injury. *Medicine and Science in Sports and Exercise*. 25 :(9) 1054-1061, 1993.

Electrical stimulation used with bicycle ergometers: Fitness implications for individuals with spinal cord injuries. *CAHPERD Journal Times*. 53 :(4) 5, 1991.

In the clinic - A clinical case study of functional aerobic exercise. *Clinical Kinesiology*. 46: (3) 21-24, 1992.

Adapted physical education in California: Employment prospects. *CAHPERD Journal Times*. January 1988.

Additional Publications

Good Posture: How Important is it in the Workplace? *The Business Times*, Vol. 17, (10), February 2010, p. 12.

Help employees to get fit: tell them to take a walk. *The Business Times*, Vol. 15, (43), June 2008, p. 18-19.

Right steps help to put out burnout. *The Business Times*, Vol. 14, (43), November 2007, p. 12.

Motivation a key aspect of retention. *The Business Times*, Vol. 14, (32), September 2007, p. 12.

By “going green,” businesses help the environment – and themselves. *The Business Times*, Vol. 14, (16), May 2007, p. 12.

Make workplaces more healthy places. *The Business Times*, Vol. 14, (1), February 2007, p. 13.

Exercise pays off for employees. *The Business Times*, Vol. 13, (39), November 2006, p. 13.

Why happy employees are likely to become productive employees. *The Business Times*, Vol. 13, (25), July 2006, p. 8.

Listen up: noise on the job hazardous to hearing. *The Business Times*, Vol. 13, (13), May 2006, p. 13.

Best health care consumers informed, assertive. *The Business Times*, Vol. 13, (5), March 2006, p. 12.

Following a few tips helps make air travel less taxing on health. *The Business Times*, Vol. 12, (44), November 2005, p. 13.

Having fun on the job: studies show laughter really is the best medicine. *The Business Times*, Vol. 12, (27), August 2005, p. 11.

A pain in the back: a pain in the pocketbook. *The Business Times*, Vol. 12, (14), May 2005, p. 11.

Preparing employees to handle emergencies can be a real life-saver. *The Business Times*, Vol. 11, (52), February 2005, p. 11.

Workplace stress affects workers’ personal health and firms’ financial health. *The Business Times*, Vol. 11, (40), November 2004, p.11.

Presentations

Ameriprise Financial, Grand Junction, CO. August 2012. *Holistic Health.*

Residence Life Staff, Mesa State College, September 2009. *How to Keep Your Skin Healthy.*

Leadership Academy, Mesa State College, November and December 2007. *Stress Management.*

36th National Adapted Physical Education Conference, San Francisco, California. November 2007. *A Motor Activities Training Program for Athletes with Severe and Profound Intellectual Disabilities.*

Associated Landscape Contractors of Colorado, Grand Junction, Colorado. October 2007. *Management Style.*

Mesa County Library District, Grand Junction, Colorado, April 2007. *Nutrition and Health.*

Student Residents Association, Mesa State College, September 2006. *Weight Management and Nutrition.*

National Multiple Sclerosis Society, Grand Junction, Colorado, September 2006. *Fitness Principles and Activities.*

National Association for Kinesiology and Physical Education in Higher Education Conference, San Diego, California. January 2006. *The making of an inter-disciplinary graduate degree: Master of Business Administration (MBA) with a track in Sport and Fitness Management.*

National Association for Kinesiology and Physical Education in Higher Education Conference, Tucson, Arizona, January 2005. *Are our PETE Students Prepared to Teach in an Inclusive Classroom?*

National Disabled Veterans Winter Sports Clinic, Snowmass, CO. April 7, 2004. *Adaptive Aquatics.*

National Disabled Veterans Winter Sports Clinic, Snowmass, CO. April 7, 2004. *Animal as Teachers and Healers.*

National Disabled Veterans Winter Sports Clinic, Snowmass, CO. April 8, 2004. *Yoga: Why Everyone who Tries It, Loves It.*

National Association for Physical Education in Higher Education Conference, Clearwater, Florida, January 2004. *Physical Activity and the Influence of Student Attitudes in the College/University General Education Program.*

COAHPERD Conference, Denver, Colorado, October 2003. *Yoga Benefits the Disabled.*

Grand Valley Audubon Society, Grand Junction, Colorado, February 2001. *Running the Grand Canyon of the Rio Colorado: Opening New Horizons for the Physically Challenged.*

Friends of the Cedaredge Public Library, Cedaredge, Colorado, March 2001. *Conquering the Colorado.*

SWD AAHPERD Conference, Honolulu Hawaii, June 22, 2000. *Adventure Programming and Psychological Implications.*

National Disabled Veterans Winter Sports Clinic Crested Butte, CO. March 29, 2000. *Adventure Programming for Individuals with Disabilities.*

Center for Independence, Grand Junction Colorado, November 1999. *Adventure Programming for the Disabled.*

Evidence Based Conference, St. Mary's Hospital, Grand Junction, Colorado December 1999. *Screening and Prevention of Osteoporosis.*

Colorado Parks and Recreation Association Annual Conference, October 1998. *Adaptive Skiing: Programming and Psychological Implications.*

National Disabled Veterans Winter Sports Clinic Crested Butte, CO. March 26, 1996. *Aquatics for Individuals with Disabilities.*

Mesa State Faculty Colloquium, Grand Junction, CO. April 5, 1995. *Health and Wellness in the Workplace.*

National Disabled Veterans Winter Sports Clinic Crested Butte, CO. March 28, 1995. *Fitness Principles and Assessment Techniques for Adults with Disabilities.*

Colorado Association for Health, Physical Education, Recreation, and Dance State Convention, Grand Junction, CO. October 8, 1995. *Adapting Games for Physical Education and Therapeutic Recreation.*

National Conference on Physical Activity for the Exceptional Individual. 1995. *Fitness Principles and Assessment Techniques for Adults with Physical Disabilities.*

National Conference on Physical Activity for the Exceptional Individual. 1994. *Functional Electrical Stimulation on Bicycle Ergometers for Individuals with Spinal Cord Injuries.*

Recent Community Service

Head Start – Body Start. National Center for Physical Development and Play. Physical Activity Consultant. 2010, 2011, and 2012.

Veterans Administration - Member of Steering Committee and CEU Coordinator for National Disabled Veterans Winter Sports Clinic. Establish and coordinate an annual educational program consisting of ten professional speakers. Develop and promote national brochure. Receive an annual grant for speaker travel (\$5000). 1993-present.

Special Olympics Colorado – Organized a Motor Activities Training Program (MATP) for individuals with severe and profound intellectual disabilities.

Injury Prevention/Prevention of Falls for the Elderly – Faith Based Community Committee

Multiple Sclerosis Society – Organized a fitness training program for individuals with multiple sclerosis.

Youth Career Exploration and Job Opportunity Fairs – participate in yearly career and job opportunity fairs in the community.

Colorado Discover Ability (CDA) – Board President - a local organization offering individuals with disabilities the opportunity to participate in outdoor sports. Submitted two grant proposals on behalf of CDA: United Way (\$3,000) and Bacon Foundation Grant (\$8,000). Both of these grants were awarded. Actively involved in fundraisers such as ski-a-thon and golf tournament. Live Well Colorado (Mesa County). Member of the Live Well Mesa State Committee. Help organize activities and programs on campus and in the community.

Healthy Children Initiative Advisory Group Member. Sponsored by Colorado State University Cooperative Extension Project. Worked on a focus group that had the goal of improving the wellness awareness for children in Mesa County.

Osteoporosis Project. Began an Osteoporosis Screening and Prevention Project for women in Mesa County. The funding (\$10,000) for this project was awarded to us from the Office of State Colleges. Our target population consists of women over the age of forty who need help with the prevention of osteoporosis. This project will include community members as well as Mesa State student involvement as team leaders.

The Adolescent Challenge. This project also received Office of State Colleges funding (\$5000). This program is designed to promote regular moderate physical activity through a 50-day program. This project will include children attending District 51 schools as well as student involvement as team leaders.

Awards and Nominations

Department of Veterans Affairs Special Contribution Award. Spring 2009, 2010, 2011, and 2012.

Distinguished Faculty award nomination for outstanding teaching, scholarship, advising, and service. Mesa State College. Spring 2009.

Mesa State College Outstanding Achievement in Service Award. Spring 2002.

CURRICULUM VITAE

KEITH R. FRITZ, PH.D.

Current Position

1997-present

- Colorado Mesa University, Department of Kinesiology
- Associate Professor specializing in Physical Education
- Supervision of Student Teachers
- Director of the MSC Home School Physical Education Program (2000-2005)

Courses taught:

- Academic: Methods of Elementary Physical Education, Organization & Administration of PE and Sport, Creative Play & literacy, Motor Learning, Motor Development, Methods of Lifetime Activities, Methods of Team Activities, Methods of Weight Training, and Health and Wellness
- General Activity: Mountain biking, badminton, racquetball, fitness walking, weight training, & body conditioning
- Distance Learning courses: Health & Wellness and Elementary School Physical Education
- Online Courses: Elementary School Physical Education and Motor Learning

College Committees served since 1997:

- Faculty Senate, Student Show Case, Academic Policies, Professional Development Funding, North Central Accreditation, Judicial Board, Tenure Evaluation, and several committees for the Dept. of Teacher Education and Dept. of Kinesiology
- Tenure status since 2002

Professional Experience

1995-1997

- Adams State College
- Assistant Professor specializing in Physical Education and Exercise Physiology
- Courses taught include: Methods of Physical Education, Issues in Wellness, Curricular Development, Health Education, and Exercise Science
- Director of the Health and Fitness Laboratory

1991-1995

- Manzano Day School, Albuquerque, NM
- Director of the K-5 Elementary Physical Education Program
- Taught 2nd through 5th grade Physical Education

1990-1991

- Academic Advisor for the Athletic Department at the University of New Mexico

Education

1988-1995 University of New Mexico, Albuquerque, NM, Ph.D. in Health, Physical Education, and Recreation

1986-1988 University of New Mexico, Albuquerque, NM, M.Sc. in Health, Physical Education, and Recreation

1979- 1985 Oregon State University, Corvallis, OR, B.Sc. in Health, Physical Education, and Recreation

Publications

Periodicals - refereed

1. Hayward WA, Fritz KR, and Greene ER: Human Middle Cerebral Artery Blood Velocity During Sexual Intercourse. *J Ultrasound Med.* 19:871-876, 2000.
2. Engstrom, C and Fritz, KR: A Step-by-Step Approach to Designing and Implementing a Bicycle Safety Program. *Colorado Association for Health, Physical Education, Recreation, and Dance Journal.* 27: 8-12, 2002.

Non-Refereed

1. Fritz KR: Resistance Training for Adolescents. *Mesa State College Sports Medicine News Letter.* 4:2-3, 1999.
2. Fritz KR: Invest in the Future of Your Company by Promoting Employee Health and Fitness. *Business Times.* Dec. 1, 2004.
3. Fritz KR: Develop an Employee Health and Fitness Program. *Business Times.* March 9, 2005.
4. Fritz KR: An Investment in Health Pays Off. *Business Times.* June 8, 2005.
5. Fritz KR: Nutrition and Job Performance. *Business Times.* September 21, 2005.
6. Fritz KR: Are Your Employees Asleep at the Job? *Business Times.* Dec. 12, 2005.
7. Fritz KR, Quatrochi, J, and Leadbetter, G: Question and Answer interview based on a study entitled: "*Are there training differences between stationary cycling and Mountain Biking?*", *VeloNews: The Journal of Competitive Cycling*, Vol. 35/No. 2, Feb: 2006.
- 8.

Papers/Abstracts Presented

International

1. Human Sexual Intercourse Does Not Increase Middle Cerebral Artery Blood Velocity at Altitude. *Hypoxia Symposium 1999.*
2. Human Regional Cerebral Hemodynamics During Light Exercise at Moderate Altitude. *Hypoxia Symposium 2001.*

National

1. Dynamic Response of the Human Cerebrovascular Circulation to the Onset of Exercise. *Experimental Biology*, 1997.
2. Dynamic Effects of Postprandial Exercise on Human Superior Mesenteric Blood Flow. *Experimental Biology*, 1997.
3. Dynamic Response of the Human Cerebrovascular Circulation During Sexual Intercourse. *Experimental Biology*, 1998.
4. Dynamic Effects of a Meal on the Distribution of Human Cardiac Output. *Experimental Biology*, 1998.
5. Exercise Training Increases Lower Limb Reactive Hyperemia. *Experimental Biology*, 1999.
6. Age Related Differences in Human Central and Regional Blood Flows After a Meal. *Experimental Biology*, 1999.

7. The Acute Effects of Tobacco on Human, Central and Regional, Blood Flows in Chronic Users. Experimental Biology, 1999.
8. Energy Restricted Diet and Free Fatty Acid Metabolism in Obese Adult Females. Experimental Biology, 2000.
9. Common Carotid Blood Flow During Ergometer Exercise in Children. Experimental Biology, 2002.
10. Central and Regional Blood Flow During Orthostatic Stress in Children. Experimental Biology, 2002.

Regional

1. Effects of Fitness Level on Human Limb Reactive Hyperemia. Lovelace Respiratory Research institute. 1998.
2. Comparison Between Field and Clinical Protocol for Cycling. Colorado Association for ACSM. 2001.

Educational Presentations

Regional

1. Future Direction in Health Education. Central District Association of the American Alliance for Health, Physical Education, Recreation, and Dance. 1998.
2. Developing and Revising Your Health Education Curriculum. Central District Association of the American Alliance for Health, Physical Education, Recreation, and Dance. 1998.
3. Future Direction in Health Education. Central District Association of the American Alliance for Health, Physical Education, Recreation, and Dance. 1999.
4. Ethics in Health Education. Central District Association of the American Alliance for Health, Physical Education, Recreation, and Dance. 1999.
5. Nutrition for Health and Performance. Kansas Department of Education, 1999.
6. Making Floor Hockey Safe. Central District Association for Health, Physical Education, Recreation, and Dance. Accepted for the 2006 Conference.

Local

1. Implementing a Personal Fitness Program. Seattle Athletic Club, 1985.
2. Improving Your Lower Back Fitness. The Department of Energy, Oakridge Tenn., 1987.
3. Reducing and Coping with Stress. The Department of Energy, Albuquerque New Mexico, 1987.
4. Eating Healthy on the Road. The Department of Energy, Albuquerque New Mexico, 1987.
5. How to Maintain an Exercise Program on the Road. The Department of Energy, Albuquerque New Mexico, 1988.
6. Implementing a Personal Fitness Program. Belen New Mexico health fair, 1988.
7. Activity and Health. Alamosa Rotary Club, 1996.
8. Energy Restrictive Diet and Free Fatty Acid Metabolism in Obese Adult Females. New Mexico Highlands University faculty colloquium, 1996.
9. Developing and Revising Your Health Education Curriculum. Colorado Association for Health, Physical Education, Recreation, and Dance. 1997.
10. Recreational Jogging. Colorado Association for Health, Physical Education, Recreation, and Dance. 1997.

11. Activity and Health. Mesa State College colloquium 1997.
12. Incorporating Mountain Biking into Your Secondary Physical Education Curriculum. Colorado Association for Health, Physical Education, Recreation, and Dance. 1998.
13. Jogging for Fun. Colorado Association for Health, Physical Education, Recreation, and Dance. 1998.
14. Nutrition for Health and Performance. Colorado Association for Health, Physical Education, Recreation, and Dance. 1999.
15. Nutrition for better Track and Field Performance. Glenwood Springs High School. 2000.
16. Exercise Physiology for Physical Educators. Colorado Association for Health, Physical Education, Recreation, and Dance. 2000.
17. Daily Physical Education Attenuates the Prevalence of Adult-Onset Diabetes in Children and Adolescents. Colorado Association for Health, Physical Education, Recreation, and Dance. 2001.
18. Aerobic Conditioning Principles: How Children Differ from Adults. Colorado Association for Health, Physical Education, Recreation, and Dance. 2001.
19. How Daily Physical Education Reduces the Prevalence of Diabetes in Children and Adolescents. Colorado Association for Health, Physical Education, Recreation, and Dance. 2002.
20. Developing a Proactive Classroom Management Plan. Keynote Speaker for MSC student internship orientation: 2003.
21. Ring Hockey: A Safe Alternative to Floor Hockey. Colorado Association for Health, Physical Education, Recreation, and Dance. 2004.
22. Adult-Onset Diabetes: How Physical Education Can Help. Colorado Association for Health, Physical Education, Recreation, and Dance. 2004.
23. Making Floor Hockey Safe. Colorado Association for Health, Physical Education, Recreation, and Dance. 2005.
24. Fun Frisbee Lead-Up Activities. Colorado Association for Health, Physical Education, Recreation, and Dance. 2006.
25. Frisbee Activities For All Ages. Colorado Association for Health, Physical Education, Recreation, and Dance. 2007.
26. A Safe Alternative to Floor Hockey. Colorado Association for Health, Physical Education, Recreation, and Dance. 2008.
27. Games with a Purpose. Colorado Association for Health, Physical Education, Recreation, and Dance. 2009.
28. Stress Management. Leadership Academy, Mesa State College. 2010
29. Socializing Children Through movement. Colorado Association for Health, Physical Education, Recreation, and Dance. 2010.
30. Stress Management. Leadership Academy, Colorado Mesa University. 2011
31. Quality Disc Activities, Colorado Association for Health, Physical Education, Recreation, and Dance. 2011.

Educational Material Reviews

1. Complete Physical Education for Grades 7-12 by Isobel Kleinman: Colorado Association for Health, Physical Education, Recreation, and Dance Journal. 27: 22, 2002.

2. It's Not Just Gym Anymore by Bane McCracken: Colorado Association for Health, Physical Education, Recreation, and Dance Journal. 27: 22, 2002.
3. Teaching Children Physical Education by George Graham: Colorado Association for Health, Physical Education, Recreation, and Dance Journal. 27: 22, 2002.
4. Play Practice: The Games Approach to Teaching and Coaching Sports by Alan Launder: Colorado Association for Health, Physical Education, Recreation, and Dance Journal. 27: 23, 2002.
5. Fit Kids Classroom Workout Video: Colorado Association for Health, Physical Education, Recreation, and Dance Journal. 27: 23, 2002.

Editorships/Boards

1. Editor/ Reviewer for: Associate Editor for Journal of Health Education since 1999-2000, Reviewer for the Colorado Association for Health, Physical Education, Recreation, and Dance. Since 2000-2001.
2. Elected Board Member for: American Heart Association. Since 1996-2002, Central District Association of the American Alliance for Health, Physical Education, Recreation, and Dance 1997-2000, Colorado Association of the American Alliance for Health, Physical Education, Recreation, and Dance 1996-1999. Colorado School Health Council 1997-1999.

Membership in Professional Organizations

1. American Alliance for Health, Physical Education, Recreation, and Dance. Present Member.
2. Central District Association of the American Alliance for Health, Physical Education, Recreation, and Dance. 1997-2000
3. Colorado Association of the American Alliance for Health, Physical Education, Recreation, and Dance. Present Member
4. Colorado School Health Council. 1997-1999

Funding Received

1. Fritz, KR and Hoffman, BR. \$4775 to implement an after school activity program for middle school students in Grand Junction. OSC Funding. 1998.
2. Developed by MSC's Community Wellness Committee. \$10,000 to implement an osteoporosis prevention program. OSC Funding. 1999

Recognition

1. American Heart Association's Community Man of the Year. 2000

Kristin Joelle Heumann, PhD, HFS, CSCS

Colorado Mesa University
1100 North Avenue
Grand Junction, CO 81501

<https://sites.google.com/site/kristinheumann/>

kheumann@coloradomesa.edu

EDUCATION

Doctor of Philosophy, Physical Activity, Nutrition & Wellness

Arizona State University

Department of Exercise & Wellness, Mesa, Arizona

May 2011

Dissertation: "The Response of Osteocalcin and Ultrasound to Exercise"

Committee Members: Pamela Swan, Chair; Brent Alvar; Linda Vaughan; Jack Chisum

Master of Science, Exercise & Wellness

Arizona State University

Department of Exercise & Wellness, Mesa, Arizona

May 2008

Thesis: "Os Calcis Stiffness Index in Jump Ropers and Normally Active Girls"

Committee Members: Pamela Swan, Chair; Carol Johnston; Chong Lee

Bachelor of Arts, Physical Education with a concentration in Fitness Management

Northwestern College

May 2006

Department of Kinesiology, Orange City, Iowa

TEACHING EXPERIENCE

University-Based

Assistant Professor, Department of Kinesiology

Colorado Mesa University, Grand Junction, Colorado

August 2011 - Present

KINA 170 – Latin Rhythms

Spring 2012-Present

This activity course is designed to introduce students to individual latin dance movements and choreography. The class is designed to improve cardiovascular fitness. Students are required to teach one pre-choreographed song to the class by the end of the course.

KINE 301 – Tests and Measurements in Sport and Physical Education

Fall 2011-Present

The purpose of this course is to help the students develop skills relating to the assessment of their students/clients fitness and knowledge. Statistics are used to demonstrate how to assess a group and explain results of the testing administered.

KINE 303 – Physiology of Exercise

Fall 2011, Fall 2012

This course studies human movement with an emphasis on physiological function of the body in response to physical activity and exercise. Hands-on experience within the laboratory is used to teach the students assessment and function at rest and during exercise.

KINE 309 – Anatomical Kinesiology

Fall 2011-Present

This course examines the structures and function of the human body, focusing on the musculoskeletal and musculotendinous systems. Hands-on experience within the laboratory is used to help the students understand how the muscles and bones work together to produce movement.

KINE 403 – Advanced Strength and Conditioning Fall 2012
 This course prepares students to become Certified Strength and Conditioning Specialists of the National Strength and Conditioning Association. Students learn about the role of specific training principles and tools to improve performance.

KINE 411 – Worksite Wellness Spring 2012
 The purpose of this course is to introduce students to worksite health promotion including the evidence to support the utilization of a health promotion program, program design and implementation. Students spend the semester developing a proposal for a worksite program within a professional organization.

KINE 494 – Structured Research Fall 2011-Present
 The purpose of this independent project is to develop the student's experience in conducting research. Students are also guided in their formation of a journal-style research article about their research project.

Teaching Associate, College of Nursing & Health Innovation
Department of Exercise & Wellness
Arizona State University, Mesa, Arizona

August 2007 – July 2011

EXW 310 – Technology in Physical Activity Fall 2010, Spring 2011, Summer 2011
 This class is designed to help the student to learn to incorporate technology into the field(s) of fitness, wellness, and physical activity. In addition, familiarization with statistical procedures and applications are utilized.

EXW 215 – Physical Activity and Healthy Lifestyles Fall, Summer 2008, Spring, Summer 2010
 The purpose of this course is the application of principles of physical activity to personal fitness testing and program planning for people of all ages, and above all, to have fun while doing it! Physical Activity and Healthy Lifestyles is delivered through lecture material available as online videos, textbook readings, a variety of physical activity and health behavior self assessments, and a variety of online quizzes and assessments.

EXW 301 – Concepts of Fitness and Wellness Fall, Summer 2008, Spring, Summer 2010
 This course examines guidelines for achieving health benefits of physical activity and other healthy lifestyles. It is for all students in the university whose major area of study is not Exercise & Wellness. The assumption is that all college graduates can experience the health benefits of appropriate regular physical activity. The purpose of this class is to give the student practical experiential learning and assess knowledge and comprehension of the key concepts presented in the PowerPoint's, videos, and textbook concepts.

EXW 315 – Lab for Exercise Physiology Summer 2010
 This course studies human movement with an emphasis on physiological function of the body in response to physical activity and exercise. Hands-on experience within the laboratory is used to teach the students assessment and function at rest and during exercise.

EXW 212 – Instructional Competency Lab: Cardiovascular Fitness

Fall 2008-Fall 2009

This theory/hands-on course is designed to help the student learn various safe and effective teaching methods and modalities that are appropriate for individuals as well as various age groups and physical abilities. This course provides the student with a basic understanding of the effects of cardiorespiratory exercises and general scientific principles relative to improving cardiorespiratory fitness. Specific core competencies are identified and addressed to provide the student with greater knowledge of requirements for various certifications.

EXW 105 – Aerobics

Fall 2007-Spring 2008

This course is designed to introduce the student to aerobic group exercise class through a variety of types and styles of movement. This course covers both hi/lo impact activities including walking/jogging routines, circuit training, step aerobics, kickboxing, jump roping, and power exercise. Props necessary for these activities such as hand weights, jump ropes, stability balls, mats, steps, and bands will be utilized.

EXW 105 – Weight Training

Fall 2007-Spring 2008

This course is designed to introduce the student to weight training through a variety of modalities involved with effective weight training including free weights, resistance equipment, bands, tubing, stability balls, and one's own body weight. This course covers how to safely use weight training in an exercise program, which muscles are being utilized in which exercises, weight training terminology, and how to design an exercise program.

Teaching Assistant, School of Health Sciences**Universidad Europea de Madrid, Madrid, Spain****January 2010 – May 2010****Practicum – Physical Fitness & Health**

Spring 2010

This hands-on course is designed to introduce students to physical fitness assessments and how to assess the client.

Aging and Older Adults

Spring 2010

This course is designed to help the students learn how to appropriately develop exercise programs for the aging adult population. Lecture and translation of research articles are utilized to familiarize students with recommendations specific to this population.

Masters Lecturer, EUROSPORT Masters in Multimedia Sports Journalism**Universidad Europea de Madrid, Madrid, Spain****February 2010****Physical Activity Sciences**

This introductory class is designed to introduce journalism students to the exercise science, sport, and health field. Information is provided to students to educate them on health benefits of physical activity, appropriate sport programming, and assessment techniques utilized in the exercise science field.

Community College-Based

Adjunct Faculty, Departments of Physical Education, Health Science, and Exercise Science
Chandler Gilbert Community College, Chandler, Arizona **August 2008 – Spring 2011**

EXS 212F – Instructional Competency Lab: Flexibility **Fall 2010, Spring 2011**

This is a hands-on course designed to teach the student how to safely and effectively instruct a wide variety of flexibility exercises one-on-one, and to groups of adults of varying ages and physical abilities. This course will cover fundamentals of participant screening, proper warm-up and cool-down, instruction of flexibility exercises, and group instruction skills. The course will address a significant number of core competencies identified for the ACSM Health Fitness Instructor Certification, as well as the NSCA Certified Strength and Conditioning Specialist and Certified Personal Trainer examinations.

PED 117 – Weight Training **Fall 2008, Fall, Spring 2009, Fall 2010, Spring 2011**

Fitness activity and wellness study to help develop a lifetime of regular exercise, stress management, and proper nutrition. Workout includes warm-up, aerobic exercise, selected strength exercises, and cool down.

HES 100 - Healthful Living **Spring 2009, Spring 2011**

This class is designed to help the student to learn the facts about personal health, wellness, and physical activity, to become an informed health, wellness, and exercise consumer, and to plan a personal lifetime health and wellness program. It is for all “first year” athletes at the college regardless of major area of study. The assumption is that all college graduates can experience the health benefits of appropriate regular physical activity. The ultimate goal is to help the student plan for a lifetime of health, wellness, and physical activity.

PED 115 – Lifetime Fitness **Fall 2008, Spring 2009**

Fitness activity and wellness study to help develop a lifetime of regular exercise, stress management, and proper nutrition. Workout includes warm-up, aerobic exercise, selected strength exercises, and cool down.

EXS 212C - Instructional Competency Lab: Cardio **Fall 2008**

This theory/hands-on course is designed to help the student learn various safe and effective teaching methods and modalities that are appropriate for individuals as well as various age groups and physical abilities. This course provides the student with a basic understanding of the effects of cardiorespiratory exercises and general scientific principles relative to improving cardiorespiratory fitness. Specific core competencies are identified and addressed to provide the student with greater knowledge of requirements for various certifications.

TEACHING INTERESTS

Sociocultural Aspects of Exercise & Sports
 Physical Fitness Assessments
 Fitness Management
 Exercise Testing

Concepts of Physical Fitness
 Cardiovascular Fitness Training
 Strength and Conditioning Training
 Exercise Prescription

RESEARCH EXPERIENCE

Research Assistant, "ASUKI-Step" Project, Arizona State University Polytechnic, 2009

Barbara E. Ainsworth, Professor

Volunteered to assist with data collection including: measuring height, weight, blood pressure, quantitative ultrasound, waist girth, waist diameter, and the Astrand submaximal bicycle ergometry test.

Research Assistant, "Effects of Combat on Physical Fitness and the Influence on Utilization of Medical Resources," Arizona State University Polytechnic, 2009-2010

Bradley Warr, PhD candidate

Volunteered to assist with data collection including: measuring height, weight, body composition using both bio-electrical impedance and Bod Pod, VO₂max with a modified Bransford and Howley Protocol, 2-minute push-up max and sit-up max tests, bench press and squat one-repetition max test.

Research Assistant, "Comparison of Total Body Water in High School Wrestlers Using Bio-Impedance Measures," Arizona State University Polytechnic, 2008

Chris Keating, MS

Volunteered to assist with data collection including: measuring height, weight, body composition using both bio-impedance spectroscopy and multi-frequency bio-electrical impedance, and hydration status.

RESEARCH INTERESTS

Quantitative ultrasound of the calcaneus in response to exercise across the lifespan

The effects of jump roping on health indices

The effects of Zumba exercise on health and psychological indices

GRANT ACTIVITY

Internal Grants

2012-2013 Colorado Mesa University Professional Development Award - \$1690

2011-2012 Colorado Mesa University Professional Development Award - \$1351

2010-2011 Arizona State University Graduate and Professional Student Association Research Grant Competition Award – \$2000 (Principal Investigator)

2010-2011 Arizona State University Charles Corbin Research Fellowship - \$500 (Principal Investigator)

2010 Arizona State University Graduate and Professional Student Association Travel Award - \$750 (Principal Investigator)

2009-2010 Arizona State University Graduate and Professional Student Association Research Grant Competition Award - \$750 (Principal Investigator)

2007-2008 Arizona State University Graduate and Professional Student Association Research Grant Competition Award - \$1900 (Principal Investigator)

2007 Arizona State University Charles Corbin Research Fellowship - \$500 (Principal Investigator)

External Grants

2010 Amateur Athletic Union Jump Rope Division Grant for Research - \$2000 (Principal Investigator)

2010 ACSM Foundation – Doctoral Student Research Grant – (\$5000) *Not-funded* (Principal Investigator)

PEER-REVIEWED PUBLICATIONS

- Warr, B.J., **Heumann, K.J.**, Dodd, D.J., Swan, P.D., Alvar, B.A. (October, 2012). Injuries, changes in fitness, and medical demands in deployed National Guard soldiers. *Military Medicine*, 177(10), 1136-1142.
- Warr, B.J., Alvar, B., Dodd, D., **Heumann, K.**, Mitros, M., Keating, C., Swan, P.D. (November, 2011). How do they compare?: an assessment of pre-deployment fitness in the Arizona National Guard. *The Journal of Strength and Conditioning Research*, 25(11), 2955-2962.

PROFESSIONAL PRESENTATIONS

- Warr, B.J., **Heumann, K.J.**, Alvar, B. (July, 2012). Effects of vibration training versus jump training on muscle strength and power. Poster presented at the 35th Annual National Strength and Conditioning Association National Conference, Providence, Rhode Island.
- Heumann, K.J.**, Warr, B.J., Swan, P.D. (March, 2012). Effect of exercise training on changes in osteocalcin, a biomarker of bone formation. Poster presented at the Rocky Mountain Chapter of the American College of Sports Medicine Annual Meeting, Colorado Springs, Colorado.
- Heumann, K.J.**, Warr, B.J., Swan, P.D. (June, 2011). Feasibility of measuring acute OCSI changes in 2 exercise groups. Poster presented at the 58th Annual American College of Sports Medicine Meeting, Denver, Colorado.
- Warr, B.J., Alvar, B., Dodd, D., **Heumann, K.J.**, Mitros, M., Keating, C., Swan, P.D. (June, 2011). How does combat effect fitness? An evaluation of deployed Arizona National Guardsmen. Presented orally at the 58th Annual American College of Sports Medicine Meeting, Denver, Colorado.
- Heumann, K.J.**, Swan, P. (October, 2010). Feasibility of measuring acute changes in os calcis stiffness index following whole-body vibration with resistance and jump training in young women. Orally presented for the student research award competition at the Southwest Chapter of the American College of Sports Medicine Annual Meeting, San Diego, California.
- Heumann, K.J.**, Warr, B., Swan, P. (June, 2010). Body composition and the relationship to strength and power. Poster presented at the 57th Annual American College of Sports Medicine Meeting, Baltimore, Maryland.
- Keating, C.J., Swan, P., **Heumann, K.J.** (June, 2010). Comparison of total body water in high school wrestlers using bio-impedance measures. Poster presented at the 57th Annual American College of Sports Medicine Meeting, Baltimore, Maryland.
- Heumann, K.J.**, Swan, P. (May, 2010). Feasibility of Measuring Acute Changes in Os Calcis Stiffness Index Following Whole Body Vibration With Resistance and Jump Training in Young Women. Poster presented at the International Osteoporosis Foundation World Congress on Osteoporosis, Florence, Italy.

Herrmann, S., **Heumann, K.J.**, Bowles, H., Meckes, N., Ainsworth, B. (May 2010). Evaluation of the Global Physical Activity Questionnaire (GPAQ). Poster presented at the *International Congress for Physical Activity and Health*, Toronto, Canada.

Heumann, K.J., Swan, P.D., Ainsworth, B., Yngve, A. (October, 2009). Comparison of bone strength in adults classified by ACSM physical activity guidelines. Poster presented at the *Southwest Chapter of the American College of Sports Medicine Annual Meeting*, San Diego, California.

Herrmann, S., **Heumann, K.J.**, Bowles, H., Ainsworth B. (October, 2009). Validity of the Global Physical Activity Questionnaire (GPAQ). Poster presented at the *Southwest Chapter of the American College of Sports Medicine Annual Meeting*, San Diego, California.

Keating, C., Swan, P., **Heumann, K.J.** (October, 2009). Comparison of total body water in high school wrestlers using bio-impedance measures. Poster presented at the *Southwest Chapter of the American College of Sports Medicine Annual Meeting*, San Diego, California.

Heumann, K.J., Swan, P.D., Kahl, K. (May, 2009). Effects of varying sports and normal activity in pre-pubescent 10-year old girls. Thematic poster presented at the *56th Annual American College of Sports Medicine Meeting*, Seattle, Washington.

Heumann, K.J., Swan, P.D. (November, 2008). A comparison of calcaneal ultrasound measurements in competitive jump ropers and normally active females. Poster presented at the *Southwest Chapter of the American College of Sports Medicine Annual Meeting*, San Diego, California.

Heumann, K.J., Swan, P.D. (February, 2008). Comparison of Calcaneal Ultrasound in Competitive Jump Ropers and Age Matched Controls. Poster presented at the *Building Healthy Lifestyles Conference*, Arizona State University, Mesa, Arizona.

COMMUNITY PRESENTATIONS

2009	In-Service at Arizona State University, Mesa, AZ "Jump Rope Instruction Training" for Physical Educators
2008	Seminar at Freescale Semiconductor, Tempe, AZ "Diabetes: Care and Prevention"
2007	Seminar at Freescale Semiconductor, Tempe, AZ "The History and Benefits of Jump Rope for Health"

PROFESSIONAL EXPERIENCE

2007-2008	Senior Lifestyle Coordinator, Freescale Semiconductor, Tempe, Arizona Handled new member registration, planned recreation events, performed fitness assessments, taught group exercise classes, and personal trained members
2007	Jump Rope Instructor, Rancho Solano, Gilbert, Arizona Taught elementary school students in an after school jump rope program. Developed plans for the program and interacted individually with students.
2006	Personal Trainer, Arizona State University, Mesa, Arizona Instructed research subjects on how to properly perform exercises.

2006	Administration Specialist, Grand Canyon State Games, Tempe, Arizona Entered participant registration into database, collected and accounted for money received, worked with commissioners to prepare and organize volunteers for each sport event, and prepared registration and athlete check-in for event day.
2005	Intern, Grand Canyon State Games, Tempe, Arizona Entered participant registration into database, attend sporting events, and organize registration information for each sport site.
2004-2006	Fitness Instructor, Northwestern College, Orange City, Iowa Instructed group fitness including: step aerobics and cardio jump rope.
2003-2004	Fitness Instructor, Fort Lewis College, Durango, Colorado Instructed group fitness: cardio jump rope.

CERTIFICATIONS

2012-Present	National Strength and Conditioning Association, Certified Strength and Conditioning Specialist
2010-Present	Zumba Licensed Instructor
2009-Present	American College of Sports Medicine Health Fitness Specialist
2006-Present	American Red Cross CPR/AED Professional Rescuer
2003-Present	Coaching Certification: American Sport Education Program

PROFESSIONAL SOCIETY MEMBERSHIPS

American College of Sports Medicine
National Strength and Conditioning Association

SERVICE

Academic

2012	Invited Reviewer, Journal of <i>BMC Pediatrics</i>
2012-Present	Wellness Committee, Member, Colorado Mesa University, Grand Junction, CO
2012-Present	Benefits Committee, Member, Colorado Mesa University, Grand Junction, CO
2012-Present	Faculty Senate Salary and Benefits Committee, Member, Colorado Mesa University, Grand Junction, CO
2012	Head Swimming Coach Search Committee, Colorado Mesa University, Grand Junction, CO
2012	Monfort Family Human Performance Lab Director Search Committee, Colorado Mesa University, Grand Junction, CO
2011-Present	Academic Advising, Advisor, Colorado Mesa University, Grand Junction, CO
2011-Present	Graduate Curriculum Committee, Member, Colorado Mesa University, Grand Junction, CO
2007-2011	Building Healthy Lifestyles Conference Registration Committee, Vice-President & President of Building Healthy Lifestyles Student Organization, Arizona State University, Mesa, Arizona
2007-2011	President: ASU Exercise and Wellness Graduate Club, Arizona State University, Mesa, Arizona
2009	Guest Lecturer, EXW 450 – Cultural and Social Issues in Exercise and Wellness, Arizona State University, Mesa, Arizona

2009 Writing Group Studio Leader, Arizona State University, Mesa, Arizona
 2006 Teaching Assistant, EXW 425 – Exercise Prescription, Arizona State University, Mesa, Arizona
 2004-2006 President & Vice-President: Kinesiology Klub, Northwestern College, Orange City, Iowa

Community

2010-2011 Member: Women’s Auxiliary Board for Improving Chandler Area Neighborhoods
 2007-2011 Co-Commissioner & Commissioner of Jump Rope: Grand Canyon State Games, Tempe, Arizona
 2007-2011 Volunteer for the Grand Canyon State Games, Summer, Winter, and Native American Games, Winners Circle Weekend, Tempe, Arizona
 2008-2011 Annual Volunteer Events:
 Frank Kush Family Fun Run and Dog Walk, Tempe, Arizona
 Relay for Life, Mesa, Arizona

AWARDS

2010 Gail Butterfield Award Recipient, Southwest American College of Sports Medicine Student Research Award Competition, San Diego, California
 2006 Physical Education Major of the Year Award, Northwestern College, Orange City, Iowa
 2004 Amateur Athletic Union Major Contributor to the Sport of Jump Rope, Des Moines, Iowa
 2002 Joe Selleh Award, Tempe, Arizona

GUY W. LEADBETTER III

2440 Santa Rosa Lane, Grand Junction, CO 81503

Home: (970) 243-6557

Work: (970) 248-1194

EDUCATION:

- 1989 - 1992 University of New Mexico; Albuquerque, NM
Ph.D., Exercise Science - May, 1993
Minor: Biology/Statistics
- 1985-1988 University of Montana; Missoula, MT
MS, Exercise Physiology/Fitness Program Management
- 1973-1977 Bowdoin College; Brunswick, ME
BA, Biology/Environmental Studies

CURRENT ACADEMIC APPOINTMENTS

- Professor, Mesa State College, Grand Junction, CO (2003-Present)
Associate. Professor, MSC, Grand Junction, CO (1998-2003)
Assistant. Professor, MSC, Grand Junction, CO (1993-1998)

PROFESSIONAL MEMBERSHIPS

- American College of Sports Medicine
Rocky Mountain Chapter of ACSM

PEER-REVIEWED PUBLICATIONS

1. Ruby, BC, Robergs, RA, **Leadbetter, GW**, Chick, T, Mermier, C: (Cross-Training between Cycling and Running in Previously Sedentary Females", Journal of Sports Medicine and Physical Fitness, 36:246-254, **1996**.
2. Robergs, RA, **Leadbetter, GW**, Ruby, BC, **McMinn, SB**, **Mermier, C**: "Blood Glucose and Glucoregulatory Hormone Responses to Solid and Liquid Carbohydrate Ingestion During Exercise." International Journal of Sports Nutrition, 8(1):70-83, **1998**.
3. Ruby, B., **Leadbetter, G.**, Armstrong, D. and Gaskill, S.: "Wildland Firefighter Load Carriage: "Effects on Transit Time and Physiological Responses During Simulated Escape to Safety Zone." International Journal of Wildland Fire, 12, 111-116, **2003**.

PEER-REVIEWED PUBLICATIONS (Con't)

4. Tissot, M., **Leadbetter, G.**, Keyes, L., Becky, V. and Hackett, P.: "Greater free plasma VEGF and lower soluble VEGF receptor-1 in acute mountain sickness". *Journal of Applied Physiology* 98: 1626-29, **2005**.
5. Tissot, M., **Leadbetter, G.**, Keyes, L., Maakestadt, K., Olsen, S. and Hackett, P. "Prophylactic Low-Dose Acetazolamide Reduces the Incidence of Acute Mountain Sickness". *High Altitude Medicine and Biology* 9: 4, **2008**.
6. Tissot, M., Keyes, L., **Leadbetter, G.**, and Hackett, P. "Ginkgo biloba for Prevention of Acute Mountain Sickness: Does it Work? *High Altitude Medicine and Biology* 10: 1, **2009**.
7. **Leadbetter, G.**, Keyes, L., Maakestadt, K., Olsen, S., Tissot, M. and Hackett, P. "Ginkgo biloba Does – and Does Not – Prevent Acute Mountain Sickness", *Wilderness and Environmental Medicine*, 20: 66-71, **2009**.
8. Hackett, P., Keyes, L., Leadbetter, G. Does "High Altitude Help", a Botanical Herb Supplement aid in acclimatization to high altitude? *In Progress* **2011**.
9. Keyes, L., Leadbetter, G., Hackett, P. "Can optic sheath diameter help diagnose acute mountain sickness". *Altitude Biology, In Progress*, **2012**.

NON - PEER-REVIEWED PUBLICATIONS/ ABSTRACTS/POSTERS

1. "Early Season Training Improvements in Collegiate Competitive Swimmers", Southwest ACSM Convention, San Diego, CA. **1990**.
2. "Cross Training between Running and Cycling in Previously Sedentary Females", Southwest ACSM Convention, San Diego, CA. **1990**.
3. "Effect of Intermittent Altitude Exposure on Erythropoiesis and Performance", Southwest ACSM Convention, San Diego, CA. **1990**.
4. "Improvements in Treadmill, Cycle and Arm Ergometry Following Cycle and Run Training in Sedentary Females." *The Physiologist* 35(4): 180, **1992**.
5. "Erythropoietic Response to Intermittent Altitude Exposure." *The Physiologist* 35(4): 233, **1992**.
6. "Early Season Training Improvements in Collegiate Distance and Sprint Swimmers." *Sports Medicine, Training and Rehabilitation* 3: 220, **1992**.
7. "Fitness Evaluation of Police Officers." *Sports Medicine, Training and Rehabilitation* 3: 225, **1992**.
8. "What's New in Ergogenic Aids?" *American Fitness Quarterly*, May/June edition, **1992**.

NON - PEER-REVIEWED PUBLICATIONS/ ABSTRACTS (Con't)

9. "Intermittent Altitude Exposure Increases Erythropoiesis", Sports Medicine, Training and Rehabilitation 4: 142, **1993**.
10. "The Effects of Liquid Versus Solid Carbohydrate on Cycling Performance." Sports Medicine, Training and Rehabilitation 4: 140, **1993**.
11. "Intermittent Altitude Exposure Ameliorates Symptoms of Acute Mountain Sickness." Sports Medicine, Training and Rehabilitation 4: 145, **1993**.
12. "Cross Training Between Cycling and Running in Previously Sedentary Females." Journal of Sports Medicine and Physical Fitness, 37(3): 175-181, **1996**.
13. "Acute Mountain Sickness and Disabilities", International Hypoxia Symposium, Jasper, Canada, **1997**.
14. "The Influence of the National Disabled Veteran's Winter Sports Clinic on the Self-Concept and Leisure Satisfaction of Adult Veteran's with Disabilities", Palestra, **1998**.
15. "Intermittent High Altitude Exposure and the Alleviation of Acute Mountain Sickness", International Hypoxia Symposium, Jasper, Canada, **1999**.
16. "Pediatric Exercise", Western Orthopedic Sports Medicine Bulletin, **2000**.
17. "Sport Nutrition for High School Athletes", Western Orthopedic Sports Medicine Bulletin, **2000**.
16. "Intermittent High Altitude Exposure and the Alleviation of Acute Mountain Sickness", International Hypoxia Symposium, Jasper, Canada, **2001**.
17. "Ginkgo biloba reduces incidence and severity of acute mountain sickness" International Hypoxia Symposium, Jasper, Canada, **2001**.
18. "Effects of standard fire fighting carrying loads on the energy expenditure during escape route hiking", American College of Sports Medicine National Conference, Baltimore, MD. **2001**.
19. "Comparison between field and clinical protocols for $\dot{V}O_2$, ventilatory threshold, RER, and prescription application", Regional American College of Sports Medicine Conference, Frisco, Colorado, **2001**.
20. "Are there training differences between stationary cycling and trail riding: a scientific approach", Velo News, **2006**.
21. Leadbetter, G., Cramer, M., Fritz, K., Galvin, A., Skarda, A., and Sands, W. "The Effect of Moderate Alcohol Consumption on Performance, Perceived Exertion and Fuel Utilization the Day Before Competition" Poster at Regional ACSM Meeting, **2010**.
22. Follet, K., Leadbetter, G. "The effect of beetroot on oxygen consumption", Regional ACSM Meeting, Poster. **2011**.
23. Mimms, C., Leadbetter, G., Alumbaugh, B. "What to wear while running in the heat", Poster presentation at Regional ACSM Conference, **2011**.

PRESENTATIONS

1. "Antioxidant Revolution" CAHPERD Conference; Denver, CO. **1990.**
2. "Altitude Illness: Pathology and Treatment", VA Winter Sports Clinic, Crested Butte, CO. **1990**
3. "What's New with Antioxidants?", Central District ACSM, Wichita, KS. **1990.**
4. "Setting up a Cardiorespiratory Program for Endurance Athletes", Western Orthopedic Sports Medicine Conference, Grand Junction, CO. **1990.**
5. "Designing a Weight Training Program", Western Orthopedic Sports Medicine Conference, Grand Junction, CO. **1990**
6. "Prescription for Young Athletes", St. Mary's Sports Medicine Conference, Grand Junction, CO. **1992.**
7. Presentation: "Designing a Cardiorespiratory Program", VA Winter Sports Clinic, Crested Butte, CO. **1993.**
8. "Effect of Intermittent Altitude Exposure on Erythropoiesis and Performance", Southwest ACSM Conference, **1993**
9. Presentation: "Exercise and Aging", VA Winter Sports Clinic, Crested Butte, CO. **1994.**
10. "Antioxidants and Your Health", Saccamono Center (Health Series), **1994.**
11. "Antioxidant Revolution", CAHPERD Conference, **1994.**
12. "Altitude Illness: Pathology and Treatment", VA Winter Sports Clinic, Crested Butte, CO. **1995.**
13. "Cardiovascular Training/ All Sports with an Emphasis in Cross Country" Western Orthopedics Sports Medicine Clinic. **1995.**
14. "What's New with Antioxidants", Central District ACSM Conference, **1995.**
15. "Designing a Weight Training Program", Western Orthopedic Sports Medicine Conference, Grand Junction, CO. **1996.**
16. "Prescription for Young Athletes", St. Mary's Sports Medicine Conference, **1996.**
17. "Training for the Adolescent", Regional Forum with coaches, **1997.**
18. "Exercise Induced Asthma", VA Winter Sports Clinic, Crested Butte, CO. **1998.**
19. "Erythropoietin Response to Intermittent High Altitude Exposure", International Hypoxia Symposium, Jasper, Canada, **1999.**
20. "Acute Mountain Sickness and Disabilities", ACSM Conference, **1999.**
21. "Exercise: Benefits and Risks", St. Mary's doctors workshop, **2000.**
22. "Evaluation, Interpretation and Exercise Prescription from a Treadmill Test", Saccamano Sports Medicine Workshop, **2002.**

PRESENTATIONS (Con't)

23. "Herbal Supplementation with Regard to Hormone Replacement Therapy", Woman's Health Fair at Adams Mark, **2003.**
24. "Weight Loss Techniques for Recreation Therapists" VA Winter Sports Clinic, Crested Butte, CO. **2004.**
25. "Anemia and the Female Athlete Triad", Women for Health Conference (St. Mary's), **2004.**
26. "Sport Nutrition", Local soccer coaches for Grand Mesa Fire Soccer Program, **2004.**
27. "Greater free plasma VEGF and lower soluble VEGF receptor-1 in acute mountain sickness" International Hypoxia Symposium at Lake Louise, Alberta, **2005.**
28. "What's new in Sports Nutrition", St. Mary's Sports Medicine Workshop Series, **2006.**
29. "Fitness Assessment and Health Promotion", Nutrition Conference, Mesa County, **2006.**
30. "Hydration and The New Glycogen Replenishment Method", Sports Nutrition Clinic with Rocky Mountain Orthopedics, **2006.**
31. "Regulation of Glycolysis", Exercise Physiology Research Group, Grand Junction, CO. **2010.**
32. "Cardiac Rehabilitation", Exercise Physiology Research Group, Grand Junction, CO. **2011.**

STEVEN ROSS MURRAY

DEPARTMENT OF KINESIOLOGY, COLORADO MESA UNIVERSITY
1100 NORTH AVENUE GRAND JUNCTION, CO 81507
smurray@coloradomesa.edu 970.248.1158

CURRICULUM VITAE

EDUCATION

Doctor of Arts, Middle Tennessee State University (Physical Education, 1996)
Master of Science, Middle Tennessee State University (Wellness and Fitness, 1993)
Bachelor of Science, University of North Alabama (Physical Education, 1991)
Berea College, Berea, Kentucky (Health and Physical Education, 1986-1988)

(Additional graduate study in human resource management, Cumberland University, Lebanon, Tennessee, 1998; N.B., I was procuring and supervising numerous grants at the time and needed to understand more about labor law.)

PROFESSIONAL EXPERIENCES

Professor, Department of Kinesiology, Colorado Mesa University, Grand Junction, Colorado (2007-present)
Head, Department of Kinesiology, Colorado Mesa University, Grand Junction, Colorado (2003-2007)
Acting Dean, School of Business and Professional Studies, Colorado Mesa University, Grand Junction, Colorado (May-August 2004)
Associate Professor, Department of Kinesiology, Colorado Mesa University, Grand Junction, Colorado (2002-2007; tenured 2003)
Assistant Professor, Department of Kinesiology (formerly Department of Human Performance and Wellness), Colorado Mesa University (formerly Mesa State College), Grand Junction, Colorado (1998-2002)

Courses Taught:

- Event and Program Management in Sport (MBA course)
- Facility and Equipment Management in Sport (MBA course)
- Governance and Communication in Sport
- History and Philosophy of Sport and Physical Education
- Organization/Administration/Legal Considerations of Sport and Physical Education
- Worksite Health Promotion
- Health and Wellness
- Methods of Track and Field
- Introduction to Higher Education
- American Red Cross Courses
 - Standard First Aid
 - Cardiopulmonary Resuscitation (CPR)
 - Water Safety Instructor
 - Lifeguard Training
- Activity courses
 - Beginning and Intermediate Swimming
 - Hiking
 - Golf

- Beginning and Intermediate Bowling

Courses Supervised:

- Internship
- Practicum
- Student Teaching Internship

On-line Courses Taught:

- Facility and Equipment Management in Sport (MBA course)
- Governance and Communication in Sport
- Organization/Administration/Legal Considerations of Sport and Physical Education
- Introduction to Sport Management
- History and Philosophy of Sport and Physical Education
- Health and Wellness

Collaborative Graduate Faculty, Minnesota State University, Mankato, Minnesota (2010-present)

National Faculty, United States Sports Academy, Daphne, Alabama (2010-present)

Courses Taught:

- Sport Facility and Event Management

Interim Women's Cross Country Coach, Department of Athletics, Colorado Mesa University, Grand Junction, Colorado (2003)

Director, Grants and Foundation Giving, Office of Development, Cumberland University, Lebanon, Tennessee (1997-98)

Visiting Assistant Professor, Division of Physical Education and Exercise Science, Lander University, Greenwood, South Carolina (1996-97)

Courses Taught:

- Historical and Philosophical Principles of Physical Education and Sport
- Wellness for Life
- American Red Cross Courses
 - Standard First Aid
 - Cardiopulmonary Resuscitation (CPR)
 - Beginning Swimming
 - Intermediate Swimming

Graduate Assistant, Department of Health, Physical Education, Recreation, and Safety, Middle Tennessee State University, Murfreesboro, Tennessee (1993-96)

Courses Taught:

- Personal Fitness
- Exercise Physiology (Teaching Internship under Dr. Timothy J. Michael)
- Tests and Measurement (Teaching Internship under Dr. Dianne Bartley)
- Performed various activities within the Human Performance Laboratory
 - Maximal and submaximal VO₂ testing via treadmill, bicycle and hand ergometry, and step test
 - Body composition assessment via skinfolds, hydrostatic weighing, and bioelectrical impedance
 - Resting and exercise electrocardiography (EKG)
 - Electromyography (EMG)
 - Rudimentary anthropometry, e.g., circumferences, height and weight, body mass index (BMI)
 - Laboratory course sessions
 - Guest lectures for various professors in undergraduate courses

Lead Wellness Advisor, Nissan Motor Manufacturing Corporation, Smyrna, Tennessee (1992-3)
—a cooperative program through Middle Tennessee State University as a master's student, supervising employees within the corporation's activity center and overseeing fitness testing, program development, recreational and aquatic activities, and certification programs for First Aid and Cardiopulmonary Resuscitation (CPR), Water Safety Instructor, and Lifeguarding.

Student Teacher (physical education, grades 5-8), Avalon Middle School, Muscle Shoals, Alabama (1991)

Undergraduate Teaching Assistant, Department of Health and Physical Education, Berea College, Berea, Kentucky (1987-88)

Courses Taught (assisted):

- Fundamental Skills
- Aquatics (i.e., Swimming and Lifesaving)

Instructor for Water Safety, First Aid, and CPR, American Red Cross (1986-2004)

Courses Taught:

- Beginning Swimming
- Intermediate Swimming
- Advanced Swimming
- Cardiopulmonary resuscitation (CPR)
- Community First Aid
- Standard First Aid
- Responding to Emergencies
- Basic Rescue
- Water Safety Instructor
- Lifesaving
- Lifeguard Training

Lifeguard, Cleveland Community Center, City of Cleveland, Cleveland, Tennessee (Summers 1986-1991, 1994-1995)

Swimming Coach, YMCA of Cleveland, Cleveland, Tennessee (Summer 1990)

Lifeguard and Swimming Instructor, YMCA of Cleveland, Cleveland, Tennessee (Spring and Summer 1985)

CERTIFICATIONS AND LICENSES (N.B., not all are current)

Health Promotion Director, Cooper Institute, Dallas, Texas

Instructor, First Aid/CPR, Lifeguard Training, and Water Safety, American Red Cross

Instructor Trainer, First Aid/CPR and Water Safety Instructor, American Red Cross

K-12 Teaching Certificate in Physical Education, State of Alabama

Driver's License with Motorcycle Endorsement, State of Colorado

Scuba Diver, Professional Association of Diving Instructors (PADI)

Open Water Diver, Professional Association of Diving Instructors (PADI)

AWARDS AND ACCOMPLISHMENTS

Distinguished Faculty Award, Outstanding Performance in Scholarship, Colorado Mesa University, 2007

Faculty Service Award, Student Services, Colorado Mesa University, 2001

Official Finisher, TIMEX® IRONMAN CANADA Triathlon Championship, 1995

Triathlon Today All-American Triathlon Team, 1987; honorable mention, 1988-1990
Triathlon Today All-American Duathlon Team honorable mention, 1990
 Triathlon Federation USA, Male Overall Mid-East Regional Triathlon Champion, 1989
 Official finisher of over 100 multi-sport events (e.g., triathlons, bi/duathlons) and road races
 Letterman in Cross Country, University of North Alabama, Florence, Alabama, 1989
 Top 10 finish at the Gulf South Conference and NCAA Qualifier Cross Country Meet, 1989
 3-year letterman in Cross Country, Berea College, Berea, Kentucky, 1986-1988
 3-time NAIA National Cross Country Championship Qualifier, 1986-88
 3-time NAIA All-District 32 Cross Country Runner, 1986-1988
 Runner on 3-time NAIA District 32 Championship Team in Cross Country, 1986-1988
 3-time top-5 finisher at the NAIA District 32 Cross Country Championships, 1986-1988
 2-year letterman in Track and Field, Berea College, Berea, Kentucky, 1988-1989
 Runner on 2-time NAIA District 32 Championship Team in Track and Field, 1988-1989
 NAIA District 32 Track Champion, 10,000m, 1988
 NAIA District 32 Track Runner-up, 3,000m steeplechase, 1988
 NAIA District 32 Track Runner-up, 10,000m, 1989
 3-year letterman in Swimming, Berea College, Berea Kentucky, 1986-1988
 Runner-up, 1650-yard Freestyle, Kentucky Intercollegiate Swimming Championship, 1989

PUBLICATIONS

Peer-reviewed Articles

1. Murray, Steven Ross, Douglas A. O'Roark, and William A. Sands. (In Preparation). The Effect of Run-up Distance and the use of *Halteres* on the Ancient Greek Long Jump (*Halma*).
2. Sands, William A., Melonie Buchanan Murray, Steven Ross Murray, Jeni R. McNeal, Guy Gregory Haff, Satoshi Mizuguchi, Michael H. Stone. (In Preparation). Effect of Peristaltic Pulse Compression on Forward Split Range of Motion in Collegiate Dancers. *Journal of Sports Science and Medicine*.
3. Austad, Mark. A., Chip R. Gay, Steven R. Murray, and Robert W. Pettitt. (In Review). Acute response of high-intensity and traditional resistance exercise on anaerobic power. *Journal of Strength and Conditioning Research*.
4. Sands, William A., Jeni R. McNeal, Gabriella Penitente, Michael H. Stone, Steven Ross Murray, Lawrence Nassar, and Monèm Jemni. (In Review). Stretching the Spine in Child Gymnasts—Dangerous? A Review. *Sports Medicine*.
5. Clark, Ida E., Brianne West, Sheila Reynolds, Steven R. Murray, and Robert W. Pettitt. (In Review). Applying the Critical Velocity Model for an Off-Season Interval Training Program. *Journal of Strength and Conditioning Research*.
6. Malehorn, Kindal, Jodi Hiniker, Theresa Mackey, Kristin J. Heumann, Steven Ross Murray, and Robert W. Pettitt. (In Review). Kinesio Tape® Applied to the Thorax Augments Ventilatory Efficiency during Heavy Exercise. *International Journal of Exercise Science*.
7. Pettitt, Robert W., Ashley M. Placek, Ida E. Clark, and Steven R. Murray. (In Review). Prescription of Interval Training Using the Critical Power Model. *Journal of Strength and Conditioning Research*.
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1. Murray, Robert W. and Steven R. Murray. (forthcoming 2012). *Diet Analyzer 3.0*. Grand Junction, CO: Black Rhino Press.
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PEER-REVIEWED CONFERENCE PRESENTATIONS AND PUBLISHED ABSTRACTS

1. 2012 Association for Distance Education and Independent Learning (ADEIL) Annual Conference. Murray, Steven. *Designing an Asynchronous, Self-Paced Course for Online and Blended Delivery: Problems, Solutions, and Results*.
2. 2012 Northland Chapter—American College of Sports Medicine Annual Meeting. Clark, Ida E., Steven Ross Murray, and Robert W. Pettitt. *Alternative Procedures for the 3-min All-Out Exercise Test*. (Published abstract in the conference's proceedings).
3. 2011 The Popular Culture Association in the South and the American Culture in the South Conference. Swanson, Margaret A., William F. Meehan III, and Steven R. Murray. *Gridiron Greatness and Traditions: Football in the Big Ten and Southeastern Conferences*.
4. 2011 American College of Sports Medicine Annual Meeting. Murray, Steven Ross, William A. Sands, Nathan A. Keck, and Douglas A. O'Roark. *Efficacy of the Ankyle in Increasing the Distance of the Ancient Greek Javelin Throw*. (Published abstract in *Medicine & Science in Sports & Exercise*, 2011, 43(5S), S598).
5. 2011 Northland Chapter—American College of Sports Medicine Annual Meeting. Placek, Ashley M., Ida E. Clark, Steven R. Murray, and Robert W. Pettitt. *3-Minute All-Out Cycle Ergometer Test for Predicting Intervals*. (Published abstract in the conference's proceedings).
6. 2011 Rocky Mountain Chapter—American College of Sports Medicine Annual Meeting. Cramer, M.J., K. Fritz, A. Skarda, J. Richmeier, B. Alumbaugh, C. Auswandon, S. Murray, R. Pettitt, and G. Leadbetter. *The Effect of Moderate Alcohol Consumption on Fuel Utilization, Perceived Exertion, and Running Performance Between Genders [sic]*. (Published abstract in the conference's proceedings).
7. 2009 Hawaii International Conference on Education. Udermann, Brian E. and Steven R. Murray. *Assessing Faculty Preference for Online Programming*.
8. 2008 American College of Sports Medicine Annual Meeting. Udermann, Brian E., Christopher J. Durall, David R. Reineke, Barbara L. Gibson, Cordial M. Gillette, Steven R. Murray, and John M. Mayer. *Ten Weeks of a Lumbar Endurance Floor Exercise Routine Improves Endurance Capacity of the Trunk Extensors*. (Published abstract in *Medicine & Science in Sports & Exercise*, 2008, 40(5S), S258).

9. 2008 Athens Institute for Education and Research/Panhellenic Association of Sports Economists and Managers International Conference on Health, Fitness, and Active Living, Athens, Greece. Murray, Steven R., Michael T. Reeder, Brian E. Udermann, and Robert W. Pettitt. *High-Risk Stress Fractures: A Case Study and Critical Review*.
10. 2007 American College of Sports Medicine Annual Meeting. Murray, Steven R., Brian E. Udermann, David M. Reineke, and Rebecca A. Battista. *Energy Expenditure of Sport Stacking*. (Published abstract in *Medicine & Science in Sports & Exercise*, 2007, 39(5S), S401).
11. 2007 American College of Sports Medicine Annual Meeting. Udermann, Brian E., Dia M. Dohlman, David M. Reineke, John M. Mayer, and Steven R. Murray. *The Effect of Motivation on Achievement and Behavior Modification in a Health and Wellness Course*. (Published abstract in *Medicine & Science in Sports & Exercise*, 2007, 39(5S), S195).
12. 2007 Far West Athletic Trainers' Association Conference. Pettitt, R. W. and S. R. Murray. *Shift of Optimum Angle and Transient Change in Fatigability and Subsequent to Repeated Eccentric Exercise is Length Dependent*. (Published abstract in the conference's proceedings).
13. 2007 Far West Athletic Trainers' Association Conference. Hatfield, L. N., R. W. Pettitt, R. S. Kraft, and S. R. Murray. *Reiter's Syndrome: A Case Report on an Atypical Cause for Ipsilateral Ankle Edema*. (Published abstract in the conference's proceedings).
14. 2006 American College of Sports Medicine Annual Meeting. Udermann, Brian E., David M. Reineke, John M. Mayer, Steven R. Murray, Rebecca A. Battista, Molly J. Uhrich. *Developing Delayed Onset Muscle Soreness in the Lumbar Extensor Muscles*. (Published abstract in *Medicine & Science in Sports & Exercise*, 2006, 38(5S), S387).
15. 2006 National Association for Kinesiology and Physical Education in Higher Education National Conference. Murray, Steven R. and Jill C. Cordova. *The Making of an Interdisciplinary Graduate Degree: Master of Business Administration (MBA) with a Track in Sport and Fitness Management*. (Published abstract in the conference's proceedings).
16. 2005 American College of Sports Medicine Annual Meeting. Udermann, Brian E., Dave M. Reineke, John M. Mayer, Steven R. Murray, Raymond D. Martinez, Mark H. Gibson, Cordial M. Gillette, and Scott T. Doberstein. *The Effect of Resistance Training on Lumbar Muscular Strength and Endurance*. (Published abstract in *Medicine & Science in Sports & Exercise*, 2005, 37(5S), S185).
17. 2005 Rocky Mountain Athletic Trainers' Association Conference. Pettitt, Robert W. and Steven R. Murray. *Changes in Optimum Angle and Fatigability Subsequent to Repeated Bouts of Eccentric Exercise at Long versus Short Muscle Length in Untrained Women*. (Published abstract in the conference's proceedings).
18. 2004 American Alliance for Health, Physical Education, Recreation, and Dance National Convention. Murray, Steven R. and Jessica L. Miller. *Wellness and Its Relationship to Self-Concept and Identity Development*. (Published abstract in *Research Quarterly for Exercise and Sport*, 2004, 75(1S), A-29).
19. 2004 American Alliance for Health, Physical Education, Recreation, and Dance National Convention. Udermann, Brian E., Steven R. Murray, John M. Mayer, and Ken Sagendorf. *Influence of Cup Stacking on Hand-Eye Coordination and Reaction Time of Second-Grade Students*. (Published abstract in *Research Quarterly for Exercise and Sport*, 2004, 75(1S), A-53).

20. 2003 American College of Sports Medicine Annual Meeting. Udermann, B.E., S.T. Doberstein, J.M. Mayer, and S.R. Murray. *Wrist Injury—Football*. (Published abstract in *Medicine & Science in Sports & Exercise*, 2003, 35(5S), S362).
21. 2002 Colorado Association for Health, Physical Education, Recreation, and Dance Convention. Murray, Steven R. *Olympic Revival: The First Three Olympiads 1896-1904*. (Published abstract in the conference's proceedings).
22. 2002 American College of Sports Medicine Annual Meeting. Udermann, B., M. Reeder, M. Copeland, R. Ryan, and S. Murray. *Urachal Cyst in a Collegiate Football Player*. (Published abstract in *Medicine & Science in Sports & Exercise*, 2002, 34(5S), S164).
23. 2001 American College of Sports Medicine Annual Meeting. Udermann, B., J. Mayer, S. Murray, and D. Babble. *Quantification of Isometric Lumbar Extension Strength on a BackUp Lumbar Extension Dynamometer*. (Published abstract in *Medicine & Science in Sports & Exercise*, 2001, 33(5S), S300).
24. 2000 American Psychological Society National Conference. Miller, Jessica L. and Steven R. Murray. *Wellness and Its Relationship to Self-Efficacy*. (Published abstract in the conference's proceedings).
25. 2000 American Alliance for Health, Physical Education, Recreation, and Dance National Convention. Murray, Steven R. and Jessica L. Miller. *Students' Attitudes Toward Wellness*. (Published abstract in *Research Quarterly for Exercise and Sport*, 2000, 71(1S), A-42).
26. 2000 American Alliance for Health, Physical Education, Recreation, and Dance National Convention. Murray, Steven R. and Jessica L. Miller. *Birth Control and Condom Usage Among College Students*. (Published abstract in *Research Quarterly for Exercise and Sport*, 2000, 71(1S), A-42).
27. 1999 Colorado Association for Health, Physical Education, Recreation, and Dance Annual Conference. Perrin, Karen and Steven R. Murray. *Developing a Collegiate Basic Instructional Program Policy Manual*. (Published abstract in the conference's proceedings).
28. 1999 American Psychological Society National Conference, Miller, Jessica L. and Steven R. Murray. *Wellness: Course Efficacy, Student Attitudes, and Relationship to Self-Concept*. (Published abstract in the conference's proceedings).
29. 1997 Southern District Association for Health, Physical Education, Recreation, and Dance Conference. Murray, Steven R. and Timothy J. Michael. *The Efficacy of an Introductory Health/Wellness Course in Positively Changing Wellness Behaviors*. (Published abstract in the conference's proceedings).
30. 1995 Southern District Association for Health, Physical Education, Recreation, and Dance Conference. Murray, Steven R. and Jim Colligon. *Wellness, Fitness, Health Habits, Blood Lipid, and Stress Profiles of Police Officers*. (Published abstract in the conference's proceedings).
31. 1994 Alabama State Association for Health, Physical Education, Recreation, and Dance Conference. Murray, Steve. *Wellness Profiles: A Comparison of University Faculty/Staff and Police Personnel*. (Published abstract in the conference's proceedings).
32. 1994 Southern District Association for Health, Physical Education, Recreation, and Dance Conference. Murray, S., McClellan, P., Michael, T., and Truelove, C. *Rate of Fluid Replacement and Heart Rate of Individuals Exercising in a Hot and Humid Environment*. (Published abstract in the conference's proceedings).

GRANTS AND CONTRACTS

Externally funded

1. Far West Athletic Trainers' Association, \$2,000 for a research study entitled *Reexamining the Mechanistic Basis of Resistive PNF Exercise* (N.B., Dr. Robert W. Pettitt was the Principal Investigator; I assisted with developing and writing the grant.), 2008.
2. Mesa County Health Department, Grand Junction, Colorado, \$2,000 for the delivery of specialized exercise courses for the *Steps to a Healthier US* initiative through the Mesa County, Colorado LiveWell program, 2006.
3. Mesa County Health Department, Grand Junction, Colorado, \$5,000 for the delivery of specialized exercise courses for the *Steps to a Healthier US* initiative through the Mesa County, Colorado LiveWell program, 2005.
4. Mesa County Health Department, Grand Junction, Colorado, \$2,000 for the delivery of a smoking cessation program to the students at Colorado Mesa University, 2002.
5. William Randolph Hearst Foundation, \$50,000 for the beginning endowment of the William Randolph Hearst Nursing Scholarship at Cumberland University, 1998 (N.B., A follow-up grant of an additional \$50,000 was awarded the following year.).
6. Tennessee Arts Commission, \$600 for the Adams Art Gallery Lecture Series at Cumberland University, 1998.
7. AT&T Foundation, \$7,000 for the Spring Lyceum Lecture Series at Cumberland University, 1998.
8. RockTenn Corporation, \$15,000 for Vise Library at Cumberland University, 1998.
9. AT&T Foundation, \$7,000 for the Fall Lyceum Lecture Series at Cumberland University, 1998.
10. Thackston Family Foundation, \$2,000 for the Adams Art Gallery Lecture Series at Cumberland University, 1998.
11. George I. Alden Trust, \$25,000 matching challenge grant for the Cumberland University Scholarship Program, 1998.
12. Tennessee Arts Commission, \$1,100 for the Middle Tennessee Professional Development Workshop, Murfreesboro, Tennessee, 1998.
13. Tennessee Historical Commission, \$29,000 for the interior renovation of Cumberland University's Baird Chapel, 1998.
14. Cracker Barrel Old Country Store Foundation, \$15,000 for the Heydel Scholarship Endowment (\$10,000) and annual funds (\$5,000) of Cumberland University, 1998.
15. Lettie Pate Whitehead Foundation, \$20,000 for the Nursing Scholarship Program at Cumberland University, 1998.
16. Cracker Barrel Old Country Store Foundation, \$15,000 for the interior renovation of Cumberland University's Baird Chapel, 1998.
17. Tennessee Arts Commission, \$2,500 for the Adams Art Gallery at Cumberland University, 1997.
18. Thackston Family Foundation, \$1,200 for the Fall Film Festival at Cumberland University, 1997.
19. Tennessee Historical Commission, \$40,000 grant for the exterior renovation of Cumberland University's Baird Chapel, 1997.
20. Private Industry Council (federal grant), \$790,000 for *The 1997 Summer Youth Employment and Training Program* through Mid-Cumberland Human Resource Agency, Nashville, Tennessee. (N.B., I worked with Dr. Daniel N. McMasters on developing and writing the grant, but he was the program director), 1997.

21. Private Industry Council (federal grant), \$436,000 for *The 1996 Summer Youth Employment and Training Program* through Mid-Cumberland Human Resource Agency, Nashville, Tennessee, 1996.

Internally funded

1. Colorado Mesa University Lectures and Forums Committee, \$700 to help bring Professor Lee Sandstead of The Travel Channel's *Art Attack with Lee Sandstead* to campus to make several lectures to the community and campus, 2008.
2. Colorado Mesa University Faculty Professional Development Fund, \$1,200 for professional development to make a presentation at the International Conference on Health, Fitness, and Active Living in Athens, Greece, 2008.
3. Colorado Mesa University Faculty Professional Development Fund, \$800 for professional development to make two presentations at the National AAHPERD Convention in New Orleans, Louisiana, 2004.
4. Office of State Colleges of Colorado, \$700 for special inventive professional development programs to obtain Health Promotion Director Certification from the Cooper Institute in Dallas, Texas, 2001.
5. Colorado Mesa University, \$800 for professional development to make two presentations at the National AAHPERD Convention in Orlando, Florida, 2000.

PROFESSIONAL WORKSHOPS/COURSES TAUGHT

- *Sport Facilities and Event Management*, Seef Area, Kingdom of Bahrain, under the auspices of the General Organization of Youth and Sports, April 5-9, 2010.

GRADUATE EDUCATION SUPERVISION

1. Austad, Mark A. (2012). *The Effects of High-Intensity vs. Traditional Resistance Training on Depleting Anaerobic Capacity*. Minnesota State University, Mankato, Master's Degree Committee Member.
2. Schommer, Paula. (2011). *Validation of the 3-minute Test to Prescribe Interval Training in Active College Runners*. Minnesota State University, Mankato, Master's Degree Research Committee Member.
3. Johnson, Tyler. (2010). *Reliability of the 3-min All-Out Exercise Test for Cycle Ergometry*. Minnesota State University, Mankato, Master's Degree Research Committee Member.
4. Mulani, Shailish. (2010). *Taping vs. Spatting on Peroneal Muscle Activation and Dynamic Single Leg Balance*. Minnesota State University, Mankato, Master's Degree Research Committee Member.
5. Malehorn, Kindall. (2010). *Effect of Diaphragmatic Kinesio Taping on Ventilation and Mechanical Efficiency during Heavy Exercise*. Minnesota State University, Mankato, Master's Degree Research Committee Member.
6. Andrews, Tedi. (2010). *Effect of Back Squats and hang Cleans Paired with Vertical jumps on Vertical Displacement*. Minnesota State University, Mankato, Master's Degree Research Committee Member.
7. Hughes, Michael. (2009). *A Comparison of the Funding of Club Sports at Institutions throughout the Rocky Mountain Athletic Conference*. Colorado Mesa University, MBA Degree Research Practicum Content Area Advisor.

PROFESSIONAL SERVICE

Invited Manuscript Reviewer, Past Imperfect (A peer-reviewed journal supported by the Department of History and Classics at the University of Alberta) (2012)
Contributing Editor, Journal of Combative Sport (2011 to present)
Contributing Editor, InYo: The Journal of Alternative Perspectives on the Martial Arts and Sciences (2011 to present)
Invited Manuscript Reviewer, European Physical Education Review (2011)
Invited Grant Reviewer, National Association for Sport and Physical Education (NASPE)'s NASPE/ING Run for Something Better® School Awards Program (2010 to 2012)
Author, Kendall Hunt Publishing Company (2009-present)
Author, Bent Tree Press (2007-2009)
Member, Executive Board of the Colorado Association for Health, Physical Education, Recreation, and Dance (1999-2004)
Editor-in-Chief, Colorado Association for Health, Physical Education, Recreation, and Dance Journal (2000-2004)
Book Reviewer, Wadsworth Group: Thomson Learning (2001-2004)
Book Reviewer, McGraw-Hill (2004-2009)
Book Reviewer, Pearson: Benjamin Cummings (2005-2007)
Book Reviewer, Holcomb Hathaway, Publishers (2006-2008)

UNIVERSITY SERVICE (N.B., Only major assignments are listed)

Colorado Mesa University (formerly Mesa State College), Grand Junction, Colorado

- *Member*, Faculty Tenure and Promotion Committee (2007-2011); Chairman of the sub-committee for promotion from Assistant to Associate Professor (2007 and 2009)
- *Member*, Faculty Pre-Tenure Review Committee (2009-2011), Chairman (2009-2010)
- *Member*, Benefits Committee (2007-2011)
- *Member*, Distance Learning and Technology Committee (2007-2009)
- *Member*, Graduate Council (2000-2010), Chairman (2002-2006), Vice Chairman (2001-2002; 2006-2007; 2008-2010)
- *Head*, Department of Kinesiology (2003-2007)
- *Acting Dean*, School of Business and Professional Studies (May-August 2004)
- *Member*, Suspensions and Appeals Committee (2003-2009)
- *Chairman*, Institutional Review Board (2009-2010)
- *Member*, nine faculty search committees and two departmental staff committees, i.e., athletic trainers (1998-present)
- *Chairman*, two faculty search committees (1998; 2002)
- *Member*, Degree Distinction Committee (2008-2009)
- *Member*, Department Head Merit Pay Committee (2007)
- *Member*, Faculty Compensation and Merit Pay Committee (2006)
- *Member*, Assistant Vice President of Academic Affairs search committee (2006)
- *Chairman*, Wrestling Head Coach search committee (2006)
- *Senator*, Faculty Senate (2003-2004)
- *Chairman*, College Organizational Structure Committee (2004)
- *Chairman*, North Central Association Accreditation Sub-committee (2004)
- *Member*, North Central Association Accreditation Committee (2004)
- *Member*, Dean search committee (2001)
- *Chairman*, Departmental NCATE preparation committee (1998)

- *Member*, Freshman Year Initiative (FYI) development committee (2002); professor for the FYI Program (2002-2008).
- Cumberland University, Lebanon, Tennessee
- *Administrator*, Baird Chapel Renovation (1997-1998), a \$250,000 grant-funded project
 - *University liaison*, *The Phoenix Ball* (1998), the major annual black-tie fund-raiser for the university
 - *Head university liaison*, Law Recognition Committee (1998), a secondary fund-raising event for the university
 - *Member*, Marketing Task Force (1997-98)
- Lander University, Greenwood, South Carolina
- *Member*, Departmental NCATE preparation committee (1997)
 - *Member*, Departmental curriculum committee (1997)
- Middle Tennessee State University, Murfreesboro, Tennessee (graduate student member)
- *Student member*, Graduate Council (1995-1996)
 - *Student member*, Institutional Review Board (1995-1996)

Robert Eugene Ryan MA, ATC, CSCS

Curriculum Vitae

Work Address: Colorado Mesa University
Program Director
Athletic Training Education Program
1100 North Ave.
Grand Junction, CO 81501
Phone: 970-248-1374
Fax: 970-248-1980
Email: rryan@coloradomesa.edu

Education:

June 2007 – present	Rocky Mountain University of Health Professions Provo, UT Doctor of Philosophy – Athletic Training Program – in progress Course work completed - Dec 2009 Qualifying examinations completed -Oct 2010
June 1990 – Aug 1992	University of Northern Colorado, Greeley CO School of Kinesiology and Physical Education Masters of Arts – Mechanical Kinesiology – 1992
Jan 1988 – May 1991	Mesa State College, Grand Junction, CO School of Social and Behavioral Sciences
Aug 1984 – May 1985	University of Colorado – Boulder, Boulder, CO School of Education
Aug 1978 – May 1984	University of Colorado – Boulder, Boulder, CO School of Arts and Sciences Bachelor of Arts – Biology – 1984
Sept 1978 – June 1981	Trinidad State Junior College, Trinidad, CO

Teaching Experience:

Fall 2009 – Present	Colorado Mesa University, Grand Junction CO Program Director –Assistant Professor – Tenure track Athletic Training Education Program Department of Kinesiology
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Teaching Experience (cont):

Fall 2005 – Sum 2009	Mesa State College, Grand Junction CO Program Director – Visiting Professor Athletic Training Education Program Department of Kinesiology
Fall 2002 – Sum 2005	Mesa State College, Grand Junction CO Coordinator of Clinical Experiences Athletic Training Education Program Human Performance and Wellness
Fall 1992 – Fall 2005	Mesa State College, Grand Junction, CO Lecturer Human Performance and Wellness
Spring 1990	Mesa State College, Grand Junction, CO Faculty Assistant
Fall 1986 – Fall 1990	Mesa State College, Grand Junction, CO Instructor

Courses taught:

Prevention and Care of Athletic Injuries
Advanced Athletic Training Principles
Therapeutic Modalities and Rehabilitative Techniques (Topics)
Training Room Organization and Administration
Introduction to Clinical Athletic Training
Clinical Experiences in Athletic Training I,II,III,IV
Field Experiences in Athletic Training I
Orthopedic Assessment / Evaluation
Upper Body Injury Assessment
Lower Body Injury Assessment
Anatomical Kinesiology
Anatomical Kinesiology Lab
Biomechanics
Biomechanics Lab
Therapeutic Modalities
Medical Conditions and Pharmacology in Sports
Standard First Aid – American Red Cross Responding to Emergencies
First Responder – American Red Cross Emergency Response
First Aid Instructor (Topics)
School and Personal Health
Community Health
Health and Wellness
Weight Training
Fitness Walking

Clinical Experience:

- Aug 1992 – Aug 2005 Mesa State College, Grand Junction, CO
Head Certified Athletic Trainer
- Aug 1991 – May 1992 Platte Valley High School, Kersey, CO
Head Certified Athletic Trainer
- Aug 1985 – June 1991 Mesa State College, Grand Junction, CO
Head Certified Athletic Trainer

Publications:

Peer Reviewed Articles:

- Ryan, R.E.**, Fullmer, J.D., Murray, S.R. Digital dislocation during American football practice, resulting in surgical amputation. A case review. *Athletic Training & Sports Health Care*. 2011;3(3) 141-143
- Ryan, R.E.**, Ward, T.E., Murray, S.R., Copeland, M.T., Udermann, B.E., Pettitt, R.W. Giant-cell reaction to a bio-absorbable implant. *Gunderson Lutheran Medical Journal*. 2009;6(1):21-23
- Ryan, R.E.**, Murray, S.R., Martin M. The use of discovery learning in athletic training education. *Athletic Therapy Today*. 2009;14(4): 32-35
- Ray T.L., Reeder M.T., Udermann B.E., Murray S.R., **Ryan R.E.**,. Lacerated Liver in an Intercollegiate men's Baseball Player During a Flag Football Game: A Case Report. *NATA News*. 2003;4:57-60

Book Chapter:

- Murray, S. R., Pettitt, R.W., Udermann, B.E., **R. E. Ryan**. Safety and Injuries. In S. Murray, (2012). *Wellness for Life*. (chapt. 7). Dubuque, IA: *Kendall Hunt Publishing Company*, (pp. 179-195).

Contributor to Book Chapter

- Ryan, R. E. (2012). Type 2 Diabetes. In S. Murray, *Wellness for Life* (chapt.2). Dubuque, IA: *Kendall Hunt Publishing Company*, (p 27).
- Ryan, R. E. (2012). Osteoporosis/Osteopenia. In S. Murray, *Wellness for Life* (chapt.5).Dubuque, IA: *Kendall Hunt Publishing Company*, (p 118).
- Murray, S.R., Pettitt, R.W., Udermann, B.E., **Ryan, R.E.** Foot care, injury prevention, and safety. In Murray, S.R (2008). *Fitness Walking*. Reno, NV: *Bent Tree Press* (pp. 89-108).

Presentations:

64th Annual National Athletic Trainers Association Annual Symposium - St. Louis, MO
June 28, 2012

Special topic - Managing Type II Diabetes

27th Annual Rocky Mountain Athletic Trainers Association Symposium
Albuquerque, NM April 9, 2011

Feature presentation - Managing Type II Diabetes

26th Annual Rocky Mountain Athletic Trainers Association Symposium
Denver, CO April 11, 2010

Feature presentation - Chronic Exertional Compartment Syndrome

25th Annual Rocky Mountain Athletic Trainers Association Symposium.
Salt Lake City, Utah April 17, 2009

Feature Presentation - Amputation: Myodesis, Myoplasty and Associated
Techniques

25th Annual Rocky Mountain Athletic Trainers Association Symposium.
Salt Lake City, Utah April 18, 2009

Workshop – Rubber Cast Construction

20th Annual Disabled Veterans Winter Sports Clinic,
Snowmass, CO April 5, 2006

Exercise and Rehab Prescription for Chronic Medical Conditions,

Certifications :

National Athletic Trainers Association NATABOC # 000050402
Certified Athletic Trainer – 1985 (current)

National Strength and Conditioning Association - cert #200013341
Certified Strength and Conditioning Specialist - 2000 (current)

American Red Cross

Health Care Provider CPR/AED (current)

Emergency Response (current)

American Red Cross Instructor

First Aid/ CPR/ AED, Sports Safety Training, Responding to Emergencies,
Emergency Response (current)

Certifications (cont):

American Red Cross Instructor Trainer

Emergency Medical Response (current)

Includes First Aid/CPR/AED, Sports Safety Training, Responding to Emergencies

Emergency Care and Safety Institute Instructor

Health Care Provider CPR (current)

Advanced First Aid/CPR (current)

Emergency Medical Responder (current)

Emergency Medical Technician (5/81- 5/84)

Membership in Professional Organizations:

National Athletic Trainers Association

(Student 1983-1985, Certified 1985- present)

Colorado Athletic Trainers Association

Secretary – Board of Directors (2008 – present)

Election Committee - chairperson (1998 - present)

National Strength and Conditioning Association

(Professional 1986 – 2000, Certified 2000- present)

University Service:

Distance Education Best Practices Committee (Fall 2011 – present)

Academic Technology Advisory Committee (Spring 2010 – present)

Department Service:

Undergraduate Curriculum Committee (Fall 2011- present)

Graduate Curriculum Committee (Fall 2010 – Spring 2011)

Search Committees

Member – Monfort Family Human Performance Lab Director (Spring 2012)

Chair – Monfort Family Human Performance Lab Director (Spring 2009)

Member – Athletic Training Education Program Director (Summer 2005)

Member – Athletic Training Education Program Director (Spring 2004)

Member – Athletic Training Education Program Director (Spring 2002)

Member – Athletic Training Education Program Director (Spring 2000)

Community Service:

American Red Cross – Western Colorado Chapter

Health and Safety Committee -- (Sept 1996 – May 2006)

Health and Safety Advisory Board/ Instructor Cadre (May 2006- present)

Instructor Trainer (1995 – present)

Volunteer Instructor (1990 – present)

CURRICULUM VITAE
ELIZABETH BOWLES SHARP
970-248-1245 (office)
esharp@coloradomesa.edu

FORMAL EDUCATION

- Ph.D., Human Performance** 2011
Concentration: Physical Education Pedagogy
Middle Tennessee State University, Murfreesboro
Dissertation: Development of Concerns about Student Learning in Physical Education Teacher Candidates During Student Teaching
Advisor: Dr. Mary Lou Veal
- M.Ed., Physical Education** 2005
Arkansas Tech University, Russellville
Thesis: Gender Differences in Throwing Skills of First and Fourth Grade Students
Advisors: Dr. Shelia Jackson and Dr. Annette Holeyfield
- B.S., Health & Physical Education** 2004
Arkansas Tech University, Magna Cum Laude

CURRENT RESEARCH INTERESTS

My interests include investigating the change in pre-service teacher concerns during the student teaching internship and the conflict of belief that they encounter during the experience. I collect data through the use of interviews, video recall, and learning communities.

PROFESSIONAL EXPERIENCE

- Assistant Professor of Kinesiology** 2011-Present
Colorado Mesa University. Responsibilities include teaching undergraduate courses, sponsoring the PE Major's Club, and advising students.
- Graduate Assistant of Health and Human Performance:** 2008-2011
Middle Tennessee State University (MTSU). Responsibilities include teaching and assisting in undergraduate courses, involvement in ongoing research projects, planning workshops, and publishing a monthly newsletter.
- Physical Education Teacher:** 2008-2011
Homer Pittard Campus School, Rutherford County Schools, Murfreesboro, TN.
Responsibilities include teaching elementary PE classes, K-6.
- Visiting Instructor of Health and Physical Education:** 2006-2008
Arkansas Tech University (ATU). Responsibilities included teaching undergraduate & graduate courses and co-sponsoring the HPEWS Major's Club.

Elizabeth Bowles Sharp

English Teacher: Xinjiang Normal University (XNJ), Urumqi, China. Responsibilities included teaching conversational English to sophomore English majors in partnership with Educational Services Exchange with China.	2005-2006
Graduate Assistant of Health and Physical Education: Arkansas Tech University. Responsibilities included teaching and assisting in undergraduate courses and assisting in the Human Performance Lab.	2004-2005
Children's Coordinator: Grace Fellowship Church, Russellville, AR. Responsibilities included coordinating volunteers and teachers for children's program, performing administrative duties, & creating curriculum for bi-weekly program.	2003-2005
Student Secretary of Health and Physical Education Department: Arkansas Tech University. Responsibilities included performing daily office jobs and assisting instructors.	2002-2004
Unit Coordinator & Assistant Athletic Director: Kanakuk Kamps, Branson, MO. Responsibilities included organizing & teaching basketball clinic everyday, writing curriculum for all sport clinics, ordering & maintaining equipment, and supervising counselors and coaches.	2001-2004

LICENSURE

Arkansas Department of Education Teacher's License. Initial Three Year. P-08 PE/Wellness/Lei; 07-12 PE/ Wellness/Lei; 07-12 Coaching. Issued 07/26/2004.

HONORS & AWARDS

Outstanding Doctoral Graduate Assistant (MTSU)	2011
TAHPERD Appreciation Award	2010
Graduate Teaching Assistantship (MTSU)	2008-2011
ArkAHPERD Hoops for Heart Coordinator of the Year	2007-2008
Outstanding Advisor of the Year (ATU)	2007-2008
Jim Ed McGhee Award (ATU)	2006
Dr. John Cadle Graduate Award	2005
Graduate Assistantship (ATU)	2004-2005
NASPE Major of the Year Award	2004
Dr. Pat Gordon Most Outstanding HPE Graduate	2004

Elizabeth Bowles Sharp

PEER-REVIEWED PUBLICATIONS

Sharp, E.B. (accepted to be published in Sep, 2012). Why you should observe yourself teaching. *COAHPERD Journal*, 37 (2).

GENERAL PUBLICATIONS

Sharp, E. B., & Kang, M. (2010). *Excel Program for Meta-Analysis Calculations* (Version 1.0) [Computer software]. Murfreesboro, Tennessee.

Bowles, E. E., & Kang, M. (March, 2010). Effect of teaching experiences on pre-service teacher concerns: A meta-analysis. Paper presented at the AAHPERD national conference, Indianapolis, Indiana. *Research Quarterly for Exercise and Sport*, 81 (Suppl 1), 41-42.

PEER-REVIEWED PRESENTATIONS

Sharp, E.B. (2012, November). *Team Handball*. Accepted to be presented at COAHPERD State Convention, Loveland, CO.

Lee, Y.S., Kim, Y., Kang, M., & **Sharp, E.B.** (2012). *Inter- and Intra-rater Reliability in a Pedagogical Content Knowledge Measurement Tool in Physical Education*. Poster presented at AAHPERD National Convention, Boston, MA.

Bowles, E. & Kang, M. (2010, March). *Effect of Teaching Experiences on Pre-Service Teaching Concerns: A Meta-Analysis*. Poster presented at AAHPERD National Convention, Indianapolis, IN.

Veal, M. L., Alstot, A., **Bowles, E.** & O'Rourke, M. (2009, October). *What Concept Maps Reveal about Teacher Candidates' Knowledge*. Presented at NASPE's Physical Education Teacher Education conference, Myrtle Beach, SC.

Jackson, S. & **Bowles, E.** (2009, April). *Rollin' Round the Rim with the Rollin' Razorbacks Basketball Team*. Presented at AAHPERD National Convention, Tampa, FL.

Bowles, E. (2008, April). *Making Hoops for Heart a College Class Project*. Presented at AAHPERD National Convention, Ft. Worth, TX.

Bowles, E. (2007, November). *Making Hoops for Heart a Class Project*. Presented at the ArkAHPERD State Convention, Eureka Springs, AR.

Bowles, E. (2006, October). *Gender Differences in Throwing Skills of First and Fourth Grade Students*. Paper presented at the Southern Academy of Women in Physical Activity, Sport, and Health Conference, Fayetteville, AR.

INVITED PRESENTATIONS

Sharp, E.B. (2012). *Jumping on Desks and Throwing Balls in the Classroom and Heart Rate Lab*. Colorado Mesa University Educators' Symposium for Western Slope Teachers.

Sharp, E.B. (2012). *Geocaching*. Presented at National Disabled Veterans Winter Sports Clinic, Aspen, CO.

Sharp, E.B. (2010 & 2011). *Geocaching and Golf*. Camp ENRGY (Excellence 'N' Recreation and Games for Youth) for youth with disabilities. Murfreesboro, TN.

Bowles, E. (2007, June). *Elementary/Secondary Classroom Management*. Presented at the PE Cohort Workshop, Arkansas Tech University, Russellville, AR.

GENERAL PRESENTATIONS

Sharp, E.B. (2012, November). *Student Leadership Conference*. Accepted to be presented at COAHPERD State Convention, Loveland, CO.

Sharp, E.B. & Veal, M.L. (2010, November). *Jeopardy, TAHPERD Style*. Presented at TAHPERD State Convention, Murfreesboro, TN.

Sharp, E.B. & Starkweather, A. (2010, November). *Superstars*. Presented at TAHPERD State Convention, Murfreesboro, TN.

Veal, M.L. & Sharp, E.B. (2010, November). *Tennessee Board of Regents Teacher Education Redesign*. Presented at TAHPERD State Convention, Murfreesboro, TN.

Bowles, E. (2009, November). *Superstars*. Presented at TAHPERD State Convention, Murfreesboro, TN.

GRANTS

CMU Faculty Professional Development Fund	October 6, 2011
Travel Grant, \$1,729.00 Funded.	

TAHPERD Talks	December 3, 2010
"TBR University Discussion of Teacher Education Redesign: Problem Based Learning"	
\$600.00 Funded	

TAHPERD Talks	May 24, 2010
"TBR University Discussion: Teacher Education Redesign"	
\$600.00 Funded	

Middle Tennessee State University Graduate Department	August 6, 2009
Travel Grant, \$500.00 Funded	

Elizabeth Bowles Sharp

CURRENT RESEARCH PROJECTS

Sharp, E.B. (submitted to *Journal of Teaching Physical Education*). Teaching concerns during student teaching: A qualitative analysis.

Sharp, E.B. (submitted to *The Physical Educator*). How concerns develop among teacher candidates.

Sharp, E.B. (in progress). The concerns of one student teacher.

Sharp, E.B. & Daniels, J.L. (in progress). What high stakes testing is doing to the student teaching experience.

Veal, M. L., Alstot, A., & Sharp, E.B. (in progress). What concept maps reveal about teacher candidates' assessment knowledge.

PROFESSIONAL SERVICE PROJECTS

- Organized, edited, and e-published monthly newsletter for HHP department graduate students and faculty. 2008-2011.
- Organized and conducted training for Graduate Teaching Assistantship recipients in the HHP department. 2009 & 2010
- Converted Driver's Education program (3 courses) into an online program for distance learning. 2010-2011.
- Developed "Excel Program for Meta-Analysis Calculations" as a free program to help with calculations necessary for conducting a Meta-Analysis. 2009
- Created promotional video for Health and Human Performance department. 2009

PROFESSIONAL ASSOCIATION MEMBERSHIPS

American Alliance of Health, Physical Education, Recreation, & Dance (2001-Present).
Colorado Association of Health, Physical Education, Recreation, & Dance (2011-Present)
Tennessee Association of Health, Physical Education, Recreation, & Dance (2008-2011).
National Association for Sports & Physical Education (2001-Present).
Kinesmetrics Club, Middle Tennessee State University (2009-2011).
Eta Sigma Pi, Middle Tennessee State University (2008-2009).
Arkansas Association of Health, Physical Education, Recreation, & Dance (2001-2008).
Southern Academy of Women in Physical Activity, Sport, and Health (2006-2007).
Arkansas Education Association (2004-2006).

PROFESSIONAL ACTIVITIES

Chair of Higher Education and Research division, COAHPERD	2012-present
Chair-elect of Physical Activity section, COAHPERD Board	2011-2012
Chair of Adapted Physical Education (appointed by president), TAHPERD Board.	2010-2011
Member of TAHPERD Conv. Planning Com. Chair of Student Social Sub Committee and Program Design Sub-Committee.	2009-2011

Elizabeth Bowles Sharp

Editor, <i>Connections</i> , HHP department newsletter.	2008-2011
Hoops for Heart Coordinator for Arkansas Tech University.	2002-2008
Advisor of Health & PE, & Wellness Science Major's Club.	2007-2008

UNIVERSITY SERVICE

Elected Senator, CMU Faculty Senate	2012-Present
Advisor, Christian Challenge	2012-Present
Advisor, Fellowship of Christian Athletes	2012-Present
Advisor, The Physical Educator's Club	2011-Present
Member, K-12 PE Advisory Committee (CMU)	2011-Present
Center for Teacher Education Liaison to Kinesiology	2011-Present
Member, Distance Learning and Technology Committee (CMU)	2011-2012
Member, Women's Bball Head Coach Search Committee (CMU)	2012
Kinesiology representative at Major's Fair	2011

COMMUNITY SERVICE

Attend Monthly District 51 Elementary PE Meetings	2011-Present
Volunteer, WOC children's ministry program	2009
Volunteer coach, 4 th grade girls basketball team	2008
Volunteer, Tri Peaks Bike Challenge	2007
Volunteer, Special Olympics State Basketball Tournament.	2007
Volunteer, USA Kids Golf Tournament.	2007-2008
Participant, NCATE review of School of Education (ATU)	2005

UNIVERSITY TEACHING EXPERIENCE

Colorado Mesa University 2011-Present

KINE 200	History and Philosophy of Sport and Physical Education
KINE 260	School and Community Health (online & live)
KINE 320	Methods of Teaching Physical Education in Elementary Schools
KINE 335	Sport in Society
KINE 408	Methods of Teaching Secondary Physical Education
KINE 497	Pre-Internship

Middle Tennessee State University 2008-2011

PHED 3500	Physical Education for Early Childhood
PHED 2020	Beginning Golf
PHED 1170	Beginning Racquetball
PHED 1080	Beginning Bowling
PHED 4900	Secondary Physical Education Teaching Methods (assistant)
PHED 4800	Elementary Physical Education Teaching Methods (assistant)

Elizabeth Bowles Sharp

*Arkansas Tech University
2006-2008*

PE 6023	Curriculum Development in Physical Education
PE 4513	Organization and Administration of Health and Physical Education
PE 3603	Methods and Materials in Physical Education for Secondary Schools
PE 3413	Coaching Theory
PE 2111	Methods of Teaching Individual Activities
PE 2101	Methods of Teaching Team Activities
PE 1201	Orientation to Health, Physical Education, and Wellness Science

*Arkansas Tech University
2004-2005*

PE 3403	Methods and Materials in Physical Education for Elementary (assistant)
PE 1991	Racquetball
PE 1851	Tennis and Basketball
PE 1411	Badminton
PE 1401	Archery and Recreational Games

*Xinjiang Normal University
2005-2006*

Conversational English
American Culture
American Experiences
English Listening Skills

SUPERVISION EXPERIENCES

EDUC 499D/H (CMU)	Student Teaching Supervisor (2011-Present) <i>Supervised internship in local schools (16 weeks)</i>
KINE 497 (CMU)	Pre-Internship Supervisor (2011-Present) <i>Supervised pre-interns in local schools (120 hours)</i>
PHED 7940 (MTSU)	Supervision of Physical Education (2011) <i>Worked one-on-one with a student teacher</i>
PHED 3500 (MTSU)	Physical Education for Early Childhood (2010-2011) <i>Took students to local schools to teach classes</i>
PHED 4900 (MTSU)	Secondary PE Teaching Methods (assistant) (2010) <i>Took students to local schools to teach classes</i>
PHED 4800 (MTSU)	Elementary PE Teaching Methods (assistant) (2009) <i>Took students to local schools to teach classes</i>
PE 3603 (ATU)	Methods and Materials in PE for Sec. Schools (2006-2008) <i>Sent students to local schools to observe & teach classes</i>

Elizabeth Bowles Sharp

PROFESSIONAL DEVELOPMENT

- Faculty Workshop on “What the Best College Teachers do,” CMU. Fall 2012.
- Colorado Association for Health, Physical Education, Recreation, & Dance State Conventions. October, 2011.
- Faculty Workshop on Learning and Study Strategies Inventory (LASSI), CMU. Fall 2011.
- “Desire 2 Learn” Training sessions, CMU. Fall, 2011.
- American Alliance of Health, Physical Education, Recreation, & Dance National Convention/Workshops. Spring 2003, 2004, 2007, 2008, 2010, 2012.
- “Shots Fired” Video about Campus Safety. MTSU Department of Public Safety. Spring 2011.
- Tennessee Association for Health, Physical Education, Recreation, & Dance State Conventions. November, 2009, 2010.
- NASPE Physical Education Teacher Education Conference. Myrtle Beach, SC, October, 2009.
- Arkansas Has it All Teacher Workshop, Arkansas Game and Fish Commission. Summer 2007.
- Initial PETE Standards Orientation, NCATE Program Report Preparation, and Assessments/Rubric Development Workshop. Spring 2007.
- Arkansas Association of Health, Physical Education, Recreation & Dance Annual Conference/Workshops. Fall 2001-2007.
- Southern Academy of Women in Physical Activity, Sport, and Health Annual Conference. Fall 2006
- Southern District of American Alliance of Health, Physical Education, Recreation, & Dance (2005)
- American Alliance of Health, Physical Education, Recreation, & Dance National Student Leadership Conference. Fall 2001

Updated September 12, 2012

Elizabeth Bowles Sharp

Gerald A. Smith, PhD
Colorado Mesa University
Grand Junction, CO 81501-3122
email: geasmith@coloradomesa.edu
phone: 970-248-1918

PROFESSIONAL INTERESTS:

Mechanics of human locomotion, injury mechanics, sport biomechanics
Science education, instrumentation and electronic resources for education

EDUCATION:

Doctor of Philosophy, 1989
The Pennsylvania State University, University Park. Major Area: Biomechanics

Master of Science, 1985
University of Illinois at Urbana-Champaign. Major Area: Biomechanics

Bachelor of Science, 1972
Walla Walla College. Major: Physics
Teaching Certification, 1975 (secondary science/math)

PROFESSIONAL EXPERIENCE:

2012 to present: Director of the Monfort Family Human Performance Laboratory, Colorado Mesa University.

2011 to present: Senior Research Fellow, Swedish National Winter Sport Research Center, Östersund, Sweden (20% position).

2008 to 2012: Professor, Department of Health, Physical Education and Recreation, Utah State University.

2002 to 2008: Professor of Biomechanics, Norges idrettshøgskole (Norwegian School of Sport Sciences), Oslo, Norway. Leader of the biomechanics group.

1989 to 2001: Associate/Assistant Professor, Department of Exercise and Sport Science, Oregon State University. Director Biomechanics Laboratory.

1976 to 1986: High School Physics and Math teacher, Walla Walla Valley Academy.

1996 to 2000 and 2010 to present: American Society of Biomechanics Executive Board.

2010 to present: Editorial Board, *Sports Biomechanics*.

PROFESSIONAL AFFILIATIONS

American College of Sports Medicine (Fellow, 1994)

American Society of Biomechanics (currently member of ASB executive board & education chair)

International Society of Biomechanics

PUBLICATIONS:

Refereed Publications:

- Bressel, E., **Smith, G.**, Miller, A., & Dolny, D. (in press). Aquatic treadmill walking: Quantifying drag force and energy expenditure. *Journal of Sport Rehabilitation*.
- Federolf, P., Reid, R., Gilgien, M., Haugen, P., & **Smith, G.** (in press). The application of principal component analysis to quantify technique in sports. *Scandinavian Journal of Medicine & Science in Sports*. doi: 10.1111/j.1600-0838.2012.01455.x
- Sandberg, J. B., Wagner, D. R., Willardson, J. M. & **Smith, G.** (2012). Acute effects of antagonist stretching on jump height, torque, and electromyography of agonist musculature. *Journal of Strength and Conditioning Research*, 26, 1249-1256.
- Smith, G.**, Rakai, M. L., Reid, R. (2012). Single-subject analysis methods for alpine skiing technique evaluation. In E. Müller et al. (Eds.), *Science and Skiing V* (pp. 407-417). Maidenhead: Meyer & Meyer Sport UK.
- Reid, R. C., Gilgien, M., Haugen, P., Kipp, R. W., & **Smith, G.** (2012). Force and energy characteristics in competitive slalom. In E. Müller et al. (Eds.), *Science and Skiing V* (pp. 373-384). Maidenhead: Meyer & Meyer Sport UK.
- Federolf, P., Reid, R., Gilgien, M., Haugen, P., & **Smith, G.** (2012). Quantitative assessment of skiing technique using principal component analysis. In E. Müller et al. (Eds.), *Science and Skiing V* (pp. 152-159). Maidenhead: Meyer & Meyer Sport UK.
- Bressel, E., **Smith, G.**, & Branscomb, J. (2010). Transmission of whole body vibration in children while standing. *Clinical Biomechanics*, 25, 181-186.
- Hansen, E. A. & **Smith, G.** (2009). Energy expenditure and comfort during Nordic walking with different pole lengths. *Journal of Strength and Conditioning Research*, 23, 1187-1194.
- Hansen, E. A. & **Smith, G.** (2009). Factors affecting cadence choice during submaximal cycling and cadence influence on performance. *International Journal of Sports Physiology and Performance*, 4, 3-17.
- Smith, G.**, Kvamme, B. & Jakobsen, V. (2009). Effectiveness of ski and pole forces in ski skating. In E. Müller, S. Lindinger & T. Stöggle (Eds.), *Science and Skiing IV* (pp. 647-656). Maidenhead: Meyer & Meyer Sport UK.
- Reid, R., Gilgien, M., Moger, T., Tjørhom, H., Haugen, P., Kipp, R. & **Smith, G.** (2009). Turn characteristics and energy dissipation in slalom. In E. Müller, S. Lindinger & T. Stöggle (Eds.), *Science and Skiing IV* (pp. 419-429). Maidenhead: Meyer & Meyer Sport UK.
- Karlsen, J., **Smith, G. A.** & Nilsson, J. E. (2008). The stroke has only a minor influence on direction consistency in golf putting among elite players. *Journal of Sports Sciences*, 26, 243-250.
- Hunter, I. & **Smith, G. A.** (2007). Preferred and optimal stride frequency, stiffness and economy: changes with fatigue during a 1-h, high-intensity run. *European Journal of Applied Physiology*, 100, 653-661.

- Krosshaug, T., Nakamae, A., Boden, B., Engebretsen, L., **Smith, G.**, Slauterbeck, J., Hewett, T. & Bahr, R. (2007). Mechanisms of anterior cruciate ligament injury in basketball; video analysis of 39 cases. *American Journal of Sports Medicine*, **35**, 359-367.
- Krosshaug, T., Nakamae, A., Boden, B., Engebretsen, L., **Smith, G.**, Slauterbeck, J. Hewett, T. & Bahr, R. (2007). Estimating 3D joint kinematics from video sequences of running and cutting maneuvers--assessing the accuracy of simple visual inspection. *Gait & Posture*, **26**, 378-385.
- Kvamme, B., Jakobsen, V., Hetland, S. & **Smith, G.** (2005). Ski skating technique and physiological responses across slopes and speeds. *European Journal of Applied Physiology*, **95**, 205-212.
- Levy, M. & **Smith, G.** (2005). Effectiveness of vibration damping with bicycle suspension systems. *Sports Engineering*, **8**, 99-106.
- Dutto, D. J. & **Smith, G. A.** (2002). Changes in spring-mass characteristics during treadmill running to exhaustion. *Medicine and Science in Sports and Exercise*, **34**, 1324-1331.
- Bauer, J. J., Fuchs, R. K., **Smith, G. A.** & Snow, C. M. (2001). Quantifying force magnitude and loading rate from drop landings that induce osteogenesis. *Journal of Applied Biomechanics*, **17**, 142-152.
- Minetti, A. E., Catelli, F., Canclini, A., Susta, D., Saibene, F. & **Smith, G.** (2001). Individual economy and general mechanics in cross-country skiing. In E. Muller, H. Schwameder, C. Raschner, S. Lindinger, & E. Kornexl (Eds.), *Science and Skiing II*. (pp. 30 - 42).
- Levy, M. & **Smith, G. A.** (2000). Effects of front suspension on mountain bike impact performance. In A. J. Subic & S. J. Haake (Eds.), *The Engineering of Sport* (pp. 255-264). Oxford: Blackwell Science.
- Katsma, D. L. & **Smith, G. A.** (1997). Analysis of needle path during intramuscular injection. *Nursing Research*, **46**, 288-292.
- Smith, G. A.**, Fewster, J. & Braudt, S. (1996). Double poling kinematics and performance in cross-country skiing. *Journal of Applied Biomechanics*, **12**, 88-103.
- Smith, G. A.** & Heagy, B. S. (1994). Kinematic analysis of skating technique of Olympic skiers in the men's 50 km race. *Journal of Applied Biomechanics*, **10**, 79-88.
- Smith, G. A.** (1992). Biomechanical analysis of cross-country skiing techniques. *Medicine and Science in Sports and Exercise*, **24**, 1015-1022.
- Chengalur, S. N., **Smith, G. A.**, Nelson, R. C. & Sadoff, A. M. (1990). Assessing sincerity of effort in maximal grip strength tests. *American Journal of Physical Medicine and Rehabilitation*, **69**, 148-153.
- Smith, G. A.** (1990). Biomechanics of crosscountry skiing. *Sports Medicine*, **9**, 273-285.
- Kennedy, P. W., Wright, D. L. & **Smith, G. A.** (1989). Comparison of film and video techniques for three-dimensional DLT Repredictions. *International Journal of Sport Biomechanics*, **5**, 457-460.
- Smith, G. A.** (1989). Padding point extrapolation techniques for the Butterworth digital filter. *Journal of Biomechanics*, **22**, 967-971.

- Smith, G. A.,** Nelson, R. C., Feldman, A. & Rankinen, J. L. (1989). Analysis of V1 skating technique of Olympic cross country skiers. *International Journal of Sport Biomechanics*, **5**, 185-207.
- Smith, G. A.,** Nelson, R. C., Sadoff, S. J. & Sadoff, A. M. (1989). Assessing sincerity of effort in maximal grip strength tests. *American Journal of Physical Medicine and Rehabilitation*, **68**, 73-80.
- Smith, G.,** McNitt-Gray, J. & Nelson, R. C. (1988). Kinematic analysis of alternate stride skating in cross country skiing. *International Journal of Sport Biomechanics*, **4**, 49-58.

Papers currently in Review:

- Miller, A. I., Heath, E. M., **Smith, G. A.,** Bressel, E. (in review 2012). The metabolic cost of balance in cycling. Submitted for publication in the journal *Medicine & Science in Sports & Exercise*.
- Rakai, M., Reid, R. C., Haugen, P. & **Smith, G.** (in review 2012). Kinetic characteristics of competitive slalom skiing. Submitted for publication in the journal *Sports Biomechanics*.
- Reid, R. C., Haugen, P., Gilgien, M., Kipp, R. W., & **Smith, G.** (in review 2011). Motion characteristics of alpine skis in slalom. Submitted for publication in the journal *Sports Engineering*.
- Rud, B., Secher, N. H., Nilsson, J., **Smith, G.,** & Hallén, J. (in review 2012). Metabolic and mechanic involvement of arms and legs in simulated double pole skiing. Submitted for publication in the *European Journal of Applied Physiology*.

Book Chapters:

- Smith, G. A.** (2003). Biomechanics of cross country skiing. In H. Rusko (Ed.), *Handbook of Sports Medicine and Science: Cross Country Skiing* (pp. 32-61). Oxford: Blackwell Science.
- Smith, G. A.** (2000). Cross-country skiing: Technique, equipment and environmental factors affecting performance. In V. Zatsiorsky (Ed.), *Biomechanics in Sport. IOC Encyclopedia of Sports Medicine Series* (pp. 247-270). Oxford: Blackwell Science.

PRESENTATIONS:

Invited Presentations:

- Smith, G.** (2012). *Skiers and Performance: Insights from Biomechanical Studies of Athletes*. Swedish Sport Research Council, Åre, Sweden.
- Smith, G.** (2011). *Measurement of Human Movement Characteristics: Group Comparisons and Single Subject Responses*. Swedish National Winter Sport Research Center, Östersund, Sweden.
- Smith, G.** (2011). *Alpine Ski Mechanics: Energy, Force, and Performance*. Annual meeting of the Southwest Region of the American College of Sports Medicine, Reno, NV.
- Smith, G.,** Reid, R., Rakai, M., Gilgien, M., Haugen, P., & Kipp, R. (2011). *Motion, force, and energy: Understand the physics, understand the skiing*. Alpine National Coaches Academy, Mammoth Mountain, CA.

- Smith, G., Rakai, M., & Reid, R. (2011).** *Direct measurement of ski forces: Unique individual patterns.* Alpine National Coaches Academy, Mammoth Mountain, CA.
- Smith, G., Holmberg, H.-C. (2010).** *Nordic skiing mechanics and physiology.* International Society of Biomechanics in Sports 2010 Congress, Marquette, MI.
- Smith, G., Laapi, M., Reid, R. & Haugen, P. (2010).** *Alpine ski reaction force and chattering characteristics.* Seminar of the Research Center for Training and Presentation: Snow-Ski-Skier Mechanical Interactions: Research Challenges and Performance Implications, Oslo, Norway.
- Smith, G. (2008).** *Mechanical and physiological interactions in cross-country skiing.* XXVth International Conference on Biomechanics in Sports, Seoul, Korea.
- Smith, G. (2007).** *Mechanical principles in cross-country skiing.* 2nd Mountain, Sport & Health International Congress, Rovereto, Italy.
- Smith, G. A., Zatsiosky, V. M., de Koning, J. J., Kram, R. & Roberts, T. J. (2006).** *Mechanical Energetics to Metabolism: Factors determining Physiological Costs of Locomotion.* Symposium of 53rd Annual Meeting of the American College of Sports Medicine, Denver, Colorado.
- Smith, G. A., Kvamme, B. & Jakobsen, V. (2006).** *Ski Skating Technique Choice: Mechanical and Physiological Factors affecting Performance.* XXIVth International Symposium on Biomechanics in Sports, Salzburg, Austria.
- Smith, G. (2003).** *Biomechanics: Measurements from the Intersection of Engineering and Biology.* Seminar for the Rikshospital Medical Technology study group, Oslo, Norway.
- Smith, G., Kvamme, B. & Jakobsen, V. (2003).** *Seminar om Langrennsteknikk.* Olympiatoppen, Oslo, Norway.
- Smith, G. & Jakobsen, V. (2003).** *New Technology in Sport: a Biomechanical Perspective.* Nordic Seminar on Sports Immersion, Oslo, Norway.
- Smith, G. (2003).** *Biomechanics in cross country skiing performance.* Biomechanics in Elite Sport Performance Symposium, 8th Annual Congress of the European College of Sport Science. Salzburg, Austria.
- Smith, G. A. (2001).** *Current Trends and Advancements in Ski Technology.* ACSM Special Event: Salt Lake City 2002 Winter Olympic Games, the annual meeting of the American College of Sports Medicine, Baltimore, Maryland.
- Smith, G. A. (1999).** *Two Decades of Olympic Biomechanics Research: What have we Learned?* KNUPE Workshop at Oregon State University.
- Smith, G. A. (1998).** *Mechanical Factors Affecting Performance in Cross-Country Skiing.* Symposium on Winter Sport Science, the annual meeting of the American College of Sports Medicine, Orlando, Florida.
- Smith, G. A. (1998)** *Web of Technology: Contributions to Biomechanical Research and Sport Throughout the Century.* Asian Games Scientific Congress, Bangkok, Thailand.

- Smith, G. A.** (1998) *Scientific Aspects of Muay Thai: Biomechanics of Roundhouse Kicks*. Asian Games Scientific Congress, Bangkok, Thailand.
- Smith, G. A. & Harris, C.** (1997). *Human Running: Linkages Between Mechanics and Metabolism*. 4th Pacific Rim Conference on Exercise Science & Sports Medicine, Corvallis, Oregon.
- Smith, G. A.** (1997). *Classical Questions and Contemporary Solutions: Biomechanics through the Century*. Presentation at the East Asian Games Sports Scientific Congress, Pusan, Korea.
- Smith, G. A.** (1992). *Biomechanical Analysis of Cross-Country Skiing Techniques*. Symposium on the Scientific Basis of Competitive Cross-Country Skiing, the annual meeting of the American College of Sports Medicine, Orlando, Florida.
- Smith, G. A.** (1990). *Current Trends in Sport Biomechanics Research and Instrumentation*. Presentation at the regional meeting of the California Association for Health, Physical Education, Recreation and Dance, Long Beach, California.
- Smith, G. A.** (1990). *The Effects of Velocity and Grade on the Kinetics of Cross Country Skating*. Presentation for the annual meeting of the Northwest Region of the American College of Sports Medicine, Portland, Oregon.
- Smith, G. A.** (1990). *Video Analysis and Three-Dimensional Techniques*. Biomechanics Workshop of the Second International Symposium on Sport Science, National College of Physical Education and Sports, Taiwan.

Conference Presentations:

- Smith, G. A., Miller, A. I., Bressel, E., & Heath, E. M.** (2012). *Cycling on rollers: Motion characteristics for dynamic stability*. Poster presentation at the annual meeting of the American College of Sports Medicine, San Francisco, CA.
- Heath, E. M., Miller, A. I., Bressel, E., & Smith, G. A.** (2012). *Comparison of peak power for cycling on ergometer and trainer*. Poster presentation at the annual meeting of the American College of Sports Medicine, San Francisco, CA.
- Miller, A. I., Heath, E. M., Bressel, E., & Smith, G. A.** (2012). *Comparison of $\dot{V}O_2$ for three cycling modes*. Poster presentation at the annual meeting of the American College of Sports Medicine, San Francisco, CA.
- Porter, R., Blackwell, S., Smith, G., Wagner, D., & Dolny, D.** (2012) *Metabolic cost comparison of running on an aquatic treadmill with water jets and land treadmill with incline*. Poster presentation at the annual meeting of the American College of Sports Medicine, San Francisco, CA.
- Blackwell, S., Porter, R., Smith, G., Wagner, D., & Dolny, D.** (2012) *Relationship of metabolic costs of aquatic treadmill versus land treadmill running*. Poster presentation at the annual meeting of the American College of Sports Medicine, San Francisco, CA.

- Smith, G., Rakai, M., & Reid, R.** (2011). *Dominant leg and injury history influence ski reaction force distribution in slalom*. Poster presentation at the annual meeting of the American College of Sports Medicine, Denver, CO.
- Smith, G., Rakai, M. L. & Reid, R.** (2010). *Single-subject analysis methods for alpine skiing technique evaluation*. Presentation at the 5th International Congress on Science and Skiing, St. Christoph am Arlberg, Austria.
- Federolf, P., Reid, R., Gilgien, M., Haugen, P. & **Smith, G.** (2010). *Principal component methods to quantify skiing technique*. Presentation at the 5th International Congress on Science and Skiing, St. Christoph am Arlberg, Austria.
- Reid, R., Gilgien, M., Haugen, P., Kipp, R., & **Smith, G.** (2010). *Force and energy characteristics in competitive slalom*. Presentation at the 5th International Congress on Science and Skiing, St. Christoph am Arlberg, Austria.
- Svandal, I., Reid, R., Haugen, P., & **Smith, G.** (2010). *Inside/Outside ski loading characteristics in elite slalom skiers in steep and flat terrain*. Poster presentation at the 5th International Congress on Science and Skiing, St. Christoph am Arlberg, Austria.
- Gilgien, M., Reid, R., Haugen, P., Kipp, R., & **Smith, G.** (2010). *Differences in mechanical characteristics determined using head instead of centre of mass trajectory*. Poster presentation at the 5th International Congress on Science and Skiing, St. Christoph am Arlberg, Austria.
- Haugen, P., Reid, R., Gilgien, M., Kipp, R., & **Smith, G.** (2010). *Outside ski motion characteristics in slalom*. Poster presentation at the 5th International Congress on Science and Skiing, St. Christoph am Arlberg, Austria.
- Kipp, R., Reid, R., Gilgien, M., Haugen, P., & **Smith, G.** (2010). *Relative contributions of leg angles to ski edging during a slalom ski turn*. Poster presentation at the 5th International Congress on Science and Skiing, St. Christoph am Arlberg, Austria.
- Toftegaard, Ø., Reid, R., Gilgien, M., Jacobsen, V., & **Smith, G.** (2010). *Uphill ski skating technique modification during competition*. Poster presentation at the 5th International Congress on Science and Skiing, St. Christoph am Arlberg, Austria.
- Bressel, E., **Smith, G.**, & Nash, D. (2010). *A comparison of vibration accelerations measured with high speed 3-D motion capture and triaxial accelerometers*. Presentation at the American Society of Biomechanics Annual Meeting, Providence, RI.
- Smith, G.**, Bressel, E., & Nash, D. (2010). *Vibration frequency influences foot to leg transmission*. Poster presentation at the American Society of Biomechanics Annual Meeting, Providence, RI.
- Smith, G. A.**, Bressel, E. & Branscomb, J. (2010). *Impact acceleration of the leg: Comparison of shod and barefoot treadmill running*. Presentation at the annual meeting of the American College of Sports Medicine, Baltimore, MD.

- Smith, G.**, Bressel, E., Branscomb, J. & Snyder, E. (2009). *Knee positioning influences whole body 3-D vibration transmission*. Presentation at the American Society of Biomechanics Annual Meeting, Penn State University, State College, PA.
- Smith, G.**, Lappi, M., & Reid, R. C. (2009). *Frequency analysis of ski chatter in slalom skiing: Comparison of inside and outside ski responses*. Poster presentation at the American Society of Biomechanics Annual Meeting, Penn State University, State College, PA.
- Branscomb, J., **Smith, G.**, & Bressel, E. (2009). *Vibration platform oscillation characteristics using high speed 3-D motion capture*. Poster presentation at the American Society of Biomechanics Annual Meeting, Penn State University, State College, PA.
- Bressel, E., **Smith, G.**, & Branscomb, J. (2009). *Transmission of whole body vibration in children while standing*. Presentation at the American Society of Biomechanics Annual Meeting, Penn State University, State College, PA.
- Lappi, M., Reid, R., Haugen, P., & **Smith, G.** (2009). *Inside/outside force ratio and ski chatter in slalom skiing*. Presentation at the American Society of Biomechanics Annual Meeting, Penn State University, State College, PA.
- Smith, G. A.**, Bressel, E. & Snyder, E. M. (2009). *Whole body vibration: Mapping of transmission with high speed motion analysis*. Poster presented at the annual meeting of the American College of Sports Medicine, Seattle.
- Hansen, E. A. & **Smith, G.** (2009). *Energy expenditure and comfort during Nordic walking and ordinary walking*. Poster presented at the annual meeting of the American College of Sports Medicine, Seattle.
- Reid, R., Gilgien, M., Kipp, R., Haugen, P. & **Smith, G.** (2009). *Mechanical energy dissipation, movement, and performance characteristics in competitive alpine skiing*. Invited symposium presentation at the annual congress of the European College of Sport Sciences, Oslo, Norway.
- Hansen, E. A. & **Smith, G.** (2009). *Energy expenditure and comfort during Nordic walking with different pole lengths*. Poster presented at the annual congress of the European College of Sport Sciences, Oslo, Norway.
- Gilgien, M., Reid, R., Haugen, P. & **Smith, G.** (2009). *The external forces acting in the direction of travel and their relation to mechanical energy dissipation*. Presentation at the annual congress of the European College of Sport Sciences, Oslo, Norway.
- Eltarvåg, B., Eriksrud, O. & **Smith, G.** (2009). *Relationship of rearfoot motion to vertical and leg stiffness in running*. Presentation at the annual congress of the European College of Sport Sciences, Oslo, Norway.
- Eriksrud, O., Eltarvåg, B., & **Smith, G.** (2009). *Relationship of rearfoot angular velocity to vertical and leg stiffness in running*. Presentation at the annual congress of the European College of Sport Sciences, Oslo, Norway.

- Haugen, P., Reid, R., Gilgien, M., Kipp, R., & **Smith, G.** (2009). *Ski-snow interaction mechanics during the transition from skidding to carving in competitive alpine skiing*. Poster presentation at the annual congress of the European College of Sport Sciences, Oslo, Norway.
- Kipp, R., Reid, R., Gilgien, M., Haugen, P., & **Smith, G.** (2009). *Fore-aft movement is adapted to gate separation by elite alpine racers in slalom*. Poster presentation at the annual congress of the European College of Sport Sciences, Oslo, Norway.
- Smith, G.** & Hunter, I. (2008). *Running step frequency and stiffness: within subject variability and asymmetry*. Paper presented at the annual meeting of the American College of Sports Medicine, Indianapolis.
- Reid, R., Gilgien, M., Moger, T., Tjørhom, H., Haugen, P., Kipp, R. & **Smith, G.** (2008). *Mechanical energy dissipation and performance in alpine ski racing*. Poster presented at the annual meeting of the American College of Sports Medicine, Indianapolis.
- Kipp, R., Reid, R., Gilgien, M., Moger, T., Tjørhom, H., Haugen, P. & **Smith, G.** (2008). *Slalom performance in elite alpine ski racing can be predicted by fore/aft movement dynamics*. Poster presented at the annual meeting of the American College of Sports Medicine, Indianapolis.
- Eriksrud, O. & **Smith, G.** (2008). *Asymmetry of unilateral leg stiffness in hopping*. Paper presented at the annual congress of the European College of Sport Sciences, Estoril, Portugal.
- Haugen, P., Reid, R., Gilgien, M., Brack, A. & **Smith, G.** (2008). *Knee joint kinematics and modern alpine ski racing technique*. Poster presented at the annual congress of the European College of Sport Sciences, Estoril, Portugal.
- Gilgien, M., Reid, R., Haugen, P., Kipp, R. & **Smith, G.** (2008). A method to capture and model the geomorphology of snowsurfaces for use in biomechanical investigations in snowsports. Poster presented at the annual congress of the European College of Sport Sciences, Estoril, Portugal.
- Haugen, P., Reid, R., Tjørhom, H., Moger, T., Gilgien, M., Kipp, R. & **Smith, G.** (2007). Center of mass velocity and the turn cycle in slalom. Poster presented at the 4th International Congress on Science and Skiing, St. Christoph a. Arlberg, Austria.
- Moger, T., Reid, R., Tjørhom, H., Gilgien, M., Haugen, P., Kipp, R. & **Smith, G.** (2007). Center of mass trajectory length and performance in slalom. Poster presented at the 4th International Congress on Science and Skiing, St. Christoph a. Arlberg, Austria.
- Tjørhom, H., Reid, R., Moger, T., Haugen, P., Gilgien, M., Kipp, R. & **Smith, G.** (2007). Fore/aft dynamics and performance in slalom. Poster presented at the 4th International Congress on Science and Skiing, St. Christoph a. Arlberg, Austria.
- Gilgien, M., Reid, R., Tjørhom, H., Moger, T., Haugen, P., Kipp, R. & **Smith, G.** (2007). Energy dissipation and slalom turn radius. Poster presented at the 4th International Congress on Science and Skiing, St. Christoph a. Arlberg, Austria.
- Smith, G.**, Moltubakk, M. & Eriksrud, O. (2007). *Relationships between stiffness, passive flexibility, dynamic range of motion and running economy*. Poster presented at the annual congress of the European College of Sport Science, Jyväskylä, Finland.

- Eriksrud, O., Moltubakk, M. & **Smith, G.** (2007). *Static flexibility measures do not determine active range of motion during running*. Poster presented at the annual congress of the European College of Sport Science, Jyväskylä, Finland.
- Moltubakk, M., Eriksrud, O. & **Smith, G.** (2007). *Changes in flexibility do not influence running movement patterns or economy*. Poster presented at the annual congress of the European College of Sport Science, Jyväskylä, Finland.
- Reid, R., Tjørhom, H., Moger, T., Haugen, P., Kipp, R. & **Smith, G.** (2007). *Accuracy of 3D position prediction over a large object space volume using pan and tilt cameras*. Poster presented at the annual congress of the European College of Sport Science, Jyväskylä, Finland.
- Smith, G. A.** (2007). *Repeatability of dynamic GPS position measurements under varying conditions*. Poster presented at the annual meeting of the American College of Sports Medicine, New Orleans.
- Eriksrud, O., Moltubakk, M. M. & **Smith, G. A.** (2007). *Flexibility and stiffness interactions influencing running economy*. Presentation at the annual meeting of the American College of Sports Medicine, New Orleans.
- Smith, G. A.**, Kvamme, B. & Jakobsen, V. (2006). *Ski skating kinematic comparisons across technique and speed*. Presentation at the annual meeting of the American College of Sports Medicine, Denver, Colorado.
- Kvamme, B., Jakobsen, V. & **Smith, G.** (2006). *Evolving skating technique: paddling and doubledance on uphill terrain*. Poster presented at the International Congress on Science and Nordic Skiing, Vuokatti, Finland.
- Rud, B., Strand, L.-E., Nilsson, J., **Smith, G.**, Seeher, N. & Hallén, J. (2006). *Double poling at submaximal intensity: leg and arm oxygen uptake distribution*. Presentation at the International Congress on Science and Nordic Skiing, Vuokatti, Finland.
- Smith, G.**, Kvamme, B. & Jakobsen, V. (2005). *Ski skating force characteristics: comparisons across speed*. Presentation at the XXth Congress of the International Society of Biomechanics. Cleveland, Ohio.
- Smith, G. A.**, Kvamme, B. & Jakobsen, V. (2005). *Ski skating force comparisons across technique and speed*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Kvamme, B., Jakobsen, V. & **Smith, G.** (2005). *Ski skating force comparisons across technique*. Poster presented at the annual meeting of the European College of Sport Science.
- Krosshaug, T., Bahr, R. & **Smith, G.** (2005). *Motion reconstruction of non-contact ACL injuries from uncalibrated video sequences*. Presentation at the Nordisk konferanse om bevegelsesanalyse, Oslo, Norway.
- Karlsen, J., **Smith, G.** & Nilsson, J. (2005). *Golf putting: what are the limiting factors in direction control?* Presentation at the Nordisk konferanse om bevegelsesanalyse, Oslo, Norway.

- Rud, B., Strand, L.-E., Nilsson, J., **Smith, G.** & Hallén, J. (2005). *Double poling at submaximal intensity: mechanical power and oxygen uptake distribution*. Presentation at the Nordisk konferanse om bevegelsesanalyse, Oslo, Norway.
- Nilsson, J., Jakobsen, V., Tveit, P. & **Smith, G.** (2004). *Poling force changes with speed in diagonal and double poling ski techniques*. Presentation at the 3rd International Congress on Skiing and Science, Aspen, Colorado.
- Smith, G.**, Nilsson, J. E., Kvamme, B., Ure, J. & Ingjer, F. (2004). *Arm, trunk and leg contributions to double poling performance in cross-country skiing*. Poster presentation at the annual meeting of the American College of Sports Medicine.
- Kvamme, B., Jakobsen, V. & **Smith, G.** (2004). *Ski skating technique: economy comparisons of V1 and V2 on uphill slopes*. Presentation at the 3rd International Congress on Skiing and Science, Aspen, Colorado.
- Smith, G.**, Kvamme, B., Jakobsen, V. E. (2004). *Ski skating force measurements: an instrumentation challenge*. Presentation at the Nordisk Konferanse i Bevegelsesvitenskap, Bergen, Norway.
- Kvamme, B., Jakobsen, V. E., Hetland, S. & **Smith, G.** (2004). *Ski skating technique and physiological responses across slopes and speeds*. Presentation at the Nordisk Konferanse i Bevegelsesvitenskap, Bergen, Norway.
- Lunder, J., Skard, Halldor & **Smith, G.** (2004). *Ski skating force measurements: an instrumentation challenge*. Presentation at the Nordisk Konferanse i Bevegelsesvitenskap, Bergen, Norway.
- Smith, G.** & Hunter, I. (2003). *Economy, stride frequency and leg stiffness change with fatigue in running*. Presentation at the Nordisk Konferanse i Bevegelsesvitenskap, Trondheim, Norway.
- Smith, G.** & Watanatada, P. (2003). *Mass-spring model with time-varying stiffness: improved prediction of GRF characteristics*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Levy, M., Orendurff, M., Lee, G., & **Smith, G.** (2003). *Wavelet analysis to compare front suspension fork vibration damping in off-road cycling*. Poster presented at the XIXth Congress of the International Society of Biomechanics, Dunedin, New Zealand.
- Hunter, I. & **Smith, G.** (2002). *Effect of fatigue on preferred and optimal stride rates in running*. Physical science award finalist presentation at the 6th IOC World Congress on Sport Sciences, St. Louis.
- Jakobsen, V., Hetland, S., Tveit, P. & **Smith, G.** (2002). *Ski skating biomechanics: individualized assessment and general principles*. Poster presented at the Science for Success Multidisciplinary International Congress, Jyväskylä, Finland.
- Levy, M. & **Smith, G.** (2002). *Rear wheel impact characteristics in off-road cycling*. Poster presented at the IVth World Congress of Biomechanics, Calgary, Canada.
- Nilsson, J., Jakobsen, V., Tveit, P., Eikrehagen, O., & **Smith, G.** (2002). *Poling forces change with pole length during maximal double poling in cross-country skiing*. Poster presented at the annual meeting of the American College of Sports Medicine.

- Smith, G.,** Nilsson, J, Jakobsen, V. & Tveit, P. (2002). *Kinetic and kinematic characteristics change with systematic variation of pole length in cross-country skiing*. Poster presented at the Science for Success Multidisciplinary International Congress, Jyvaskyla, Finland.
- Smith, G. & Watanatada, P.** (2002). *Adjustment of vertical displacement and stiffness with changes to running footwear stiffness*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Tveit, P., Nilsson, J. & **Smith, G.** (2002). *Temporal pattern changes with speed in cross-country skiing*. Poster presented at the Science for Success Multidisciplinary International Congress, Jyvaskyla, Finland.
- Jia, J. & **Smith, G.** (2001). *Prosthetic and intact leg stiffness comparison in subjects with unilateral below knee amputation*. Poster presented at the annual meeting of the American Society of Biomechanics, San Diego, California.
- Levy, M. & **Smith, G. A.** (2001). *Vertical force and impulse during bump impact using mountain bike suspension forks*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Levy, M. & **Smith, G. A.** (2001). *Effectiveness of front suspension vibration damping in off-road cycling*. Poster presented at the XVIIIth Congress of the International Society of Biomechanics, Zurich, Switzerland.
- Lee, K-K., **Smith, G. A.,** Woo, S-Y. (2000). *The effects of turning direction on lower extremity joint moments during fast cutting movement*. Poster presented at the XVIIth International Symposium on Biomechanics in Sports.
- Levy, M. & **Smith, G. A.** (2000). *Effects of front suspension on mountain bike impact performance*. Paper presented at the 3rd International Conference on the Engineering of Sport.
- Bauer, J.J., Fuchs, R.K., **Smith, G. A.,** Costello, M. & Snow, C.M. (2000). *Kinetic and kinematic characteristics of children participating in osteogenic exercise*. Thematic poster presented at the annual meeting of the American College of Sports Medicine.
- Hannigan-Downs, K.S., Harter, R.A., & **Smith, G. A.** (2000). *Radiographic validation and reliability of selected clinical measures of pronation*. Paper presented at the 51st annual meeting of the National Athletic Trainers' Association.
- Dutto, D. & **Smith, G.** (1999). *Speed skating temporal characteristics from the 1998 Winter Olympics and World Championships*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Dutto, D. & **Smith, G. A.** (1999). *Changes in vertical ground reaction force during endurance running to exhaustion on a treadmill*. Poster presented at the annual meeting of the American Society of Biomechanics.
- Juergens, C. A., Rose, D.J., **Smith, G.A.** & Calder, C.A. (1999). *A kinetic and kinematic comparison of the grab and track starts in competitive swimming*. Poster presented at the annual meeting of the American College of Sports Medicine.

- Lee, K-K. & **Smith, G.A.** (1999). *The effect of turning direction on lower extremity joint moments*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Levy, M., **Smith, G.A.** & Orendurff, M. (1999). *Horizontal braking impulses with mountain bike suspension forks*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Dutto, D.J., and **Smith, G.A.** (1998). *Spring-Mass Model Characteristics as a Function of Running Speed*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Dutto, D.J., Levy, M., Lee, K.K., Sidthilaw, & **Smith, G.A.** (1997). *Effect of fatigue and gender on running mechanics*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Levy, M., Fewster, J.B., & **Smith, G.A.** (1997). *Bilateral variability of ground reaction force characteristics during running*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Smith, G. A.**, & Fewster, J. B. (1996). *Variability of ground reaction force characteristics for slow running speeds*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Fewster, J. B., & **Smith, G. A.** (1996). *The influence of midstance vertical ground reaction force on the human walk-run transition*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Orendurff, M. S., & **Smith, G. A.** (1996). *Impact acceleration dampening with mountain bike suspense forks*. Paper presented at the annual meeting of the American College of Sports Medicine.
- Smith, G.A.** & Fewster, J. B. (1995). *Two-dimensional panning algorithm for wide field planar motion*. Paper presented at the XVth Congress of the International Society of Biomechanics, Jyvaskyla, Finland.
- Fewster, J. B. & **Smith, G. A.** (1995). *Development of a treadmill for measuring vertical ground reaction forces and center of pressure during gait*. Paper presented at the XVth Congress of the International Society of Biomechanics, Jyvaskyla, Finland.
- Levy, M. & **Smith, G. A.** (1995). *Validation of MacReflex motion analysis system for three-dimensional coordinate prediction*. Paper presented at the XVth Congress of the International Society of Biomechanics, Jyvaskyla, Finland.
- Smith, G. A.**, Fewster, J. B. & Braudt, S. M. (1995). *Shoulder and elbow kinematics during double-poling of Olympic cross-country skiers*. Paper presented at the annual meeting of the American College of Sports Medicine.
- Fujimoto, K. & **Smith, G. A.** (1995). *Temporal differences of trunk rotation in golf swings of elite golfers*. Paper presented at the annual meeting of the American College of Sports Medicine.
- Harris, C., **Smith, G. A.**, Wilcox, A. & Fujimoto, K. (1995). *The influence of speed on the metabolic and mechanical task costs of treadmill running*. Paper presented at the annual meeting of the American College of Sports Medicine.

- Smith, G. A. & Heagy, B. S.** (1994). *Ski Edging and Skating Performance of Olympic Cross-Country Skiers*. Paper presented at the annual meeting of the American College of Sports Medicine.
- Fewster, J. B., **Smith, G. A. & Heagy, B. S.** (1994). *Body Alignment in Ski-Skating of Olympic Cross-Country Skiers*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Lee, K. K. & **Smith, G. A.** (1994). *The Effect of Fatigue on the Kinematics of Olympic Marathon Runners*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Boschma, A. C., **Smith, G. A. & Lawson, L.** (1994). *Breast Support for the Active Woman: Relationship to 3D Kinematics of Running*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Harter, R. A., Lew, D. H., **Smith, G. A. & Orendurff, M.** (1994). *Comparison of Objective and Subjective Measures of Motion Restraint Provided by Ankle Prophylaxes*. Paper presented at the annual meeting of the American College of Sports Medicine.
- DeBeliso, M. A., **Smith, G. A., Fujimoto, K. & Adams, K. A.** (1994). *The Effect of Replacement Shoe Insoles on Tibial Impact Acceleration Characteristics*. Paper presented at the annual meeting of the American College of Sports Medicine.
- Orendurff, M. S., Fujimoto, K. & **Smith, G. A.** (1994). *The Effect of Mountain Bike Suspension Fork Stiffness on Impact Acceleration Characteristics*. Paper presented at the annual meeting of the American College of Sports Medicine.
- DeBeliso, M. A., **Smith, G. A., Fujimoto, K. & Adams, K. A.** (1994). *The Effect of Replacement Shoe Insoles on Tibial Impact Acceleration Characteristics*. Poster presented at the annual meeting of the Northwest Region American College of Sports Medicine.
- Smith, G. A. & Heagy, B. S.** (1993). *Mechanical Energy Characteristics of Olympic Cross-Country Skiers*. Paper presented at the annual meeting of the American College of Sports Medicine.
- Johnson, L. W., Calder, C. A. & **Smith, G. A.** (1993). *Instrumenting an exercise treadmill for evaluation of vertical ground reaction forces*. Paper presented at the SEM Spring Meeting, Dearborn, Michigan.
- Humphreys, S. E., Street, G. M. & **Smith, G. A.** (1993). *Kinematic Analysis of Female Olympic Cross-Country Skiers*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Orendurff, M. S. & **Smith, G. A.** (1993). *Transition Techniques used by Olympic Cross-Country Skiers*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Smith, G. A. & Sadoff, A. M.** (1993). *Detection of Submaximal Effort in Isometric Back Flexion Strength Assessment*. Paper presented at the International Society of Biomechanics XIVth Congress, Paris, France.
- Smith, G. A. & Sadoff, A. M.** (1993). *Trunk Range of Motion against Resistance in a Population with Back Injuries*. Paper presented at the International Ergonomics Association World Conference, Warsaw, Poland.

- Sadoff, A. M. & **Smith, G. A.** (1993). *Trunk Angular Velocity Characteristics in a Back Injured Population*. Paper presented at the Annual International Industrial Ergonomics and Safety Conference, Copenhagen, Denmark.
- Sadoff, A. M. & **Smith, G. A.** (1992). *Computer Based Force Measurements: A Tool for Assessing Sincerity of Effort in Grip Strength Tests*. Paper presented at the XIth World Congress of the International Federation of Physical Medicine and Rehabilitation, Dresden, Germany.
- Sadoff, A. M. & **Smith, G. A.** (1992). *Detection of Submaximal Effort in Isometric Back Strength Assessment*. Paper presented at the Low Back Pain International meeting, Aalborg, Denmark.
- Sadoff, A. M. & **Smith, G. A.** (1992). *Unresisted Range of Motion in Back Pain Patients*. Paper presented at the International Symposium on Advances in Idiopathic Low Back Pain, Vienna, Austria.
- Sadoff, A. M. & **Smith, G. A.** (1992). *Detection of Submaximal Effort in Dynamic Back Strength Assessment*. Paper presented at the American Back Society meeting, San Francisco.
- Sadoff, A. M. & **Smith, G. A.** (1992). *Trunk Range of Motion in a Population with Back Injuries*. Paper presented at the Industrial Ergonomics and Safety Conference, Denver, Colorado.
- Sadoff, A. M. & **Smith, G. A.** (1992). *Sincerity of Effort Assessment for Isometric Neck Flexion Strength Measurement*. Paper presented at the International Scientific Congress on Prevention of Musculoskeletal Disorders, Stockholm, Sweden.
- Sadoff, A. M. & **Smith, G. A.** (1992). *Sincerity of Effort Assessment for Isometric Neck Extension Strength Measurement*. Paper presented at Ergonomics Society Annual Conference, United Kingdom.
- Fecteau, A. J. & **Smith, G. A.** (1992). *Frontal Plane Knee Kinematics during Stationary Cycling with Clipless Pedals*. Paper presented at the annual meeting of the American College of Sports Medicine.
- Smith, G. A.**, Sadoff, A. M., Fujimoto, K. & Bednarski, P. H. (1991). *Validation of a Protocol for Determining Submaximal Efforts in Back Strength Assessment*. Paper presented at the XIIIth International Congress on Biomechanics, Perth, Australia.
- Smith, G. A.**, Nelson, R. C. & Aro, T. A. (1991). *Mechanical Energy Characteristics of Olympic Cross Country Skiers using Skating Techniques*. Paper presented at the Second IOC World Congress on Sport Sciences, Barcelona, Spain.
- Sadoff, A. M., **Smith, G. A.** & Fujimoto, K. (1991). *Dynamic Back Strength Assessment: Validation of a Protocol for Determining Submaximal Efforts*. Poster presented at the 11th Congress of the International Ergonomics Association, Paris, France.
- Harris, C., **Smith, G.** & Wilcox, A. (1991). *Estimated Metabolic Rates based on Mechanical Energy Analysis of Treadmill Running*. Paper presented at the annual meeting of the American College of Sports Medicine.
- Smith, G. A.** & Nelson, R. C. (1991). *Mechanical Energy and Estimated Metabolic Rates of Nordic Skiers Using Skating Techniques*. Paper presented at the International Congress and Exposition on Sport Medicine and Human Performance, Vancouver, BC.

- Harris, C., Wilcox, A., **Smith, G.**, Quinn, C. & Lawson, L. (1990). *The Effect of Delayed Onset Muscle Soreness (DOMS) on Running Kinematics*. Poster presented at the annual meeting of the American College of Sports Medicine.
- Aro, T. A., **Smith, G. A.** & Nelson, R. C. (1990). *An analysis of male and female Olympic Skiers: Effect of slope on V1 skate Kinematics*. Paper presented at the annual meeting of the American College of Sports Medicine.
- Smith, G. A.** (1990). *Center of Pressure Patterns in Cross Country Ski Skating*. Paper presented at the annual meeting of the American College of Sports Medicine.
- Smith, G. A.** (1989). *Kinetic Analysis of the V1 Skate in Cross Country Skiing*. Paper presented at the First International Olympic Committee World Congress of Sport Sciences, Colorado Springs, Colorado.
- Smith, G. A.** & Nelson, R. C. (1988). *Effects of increased Velocity on the Kinematics of V1 Skating in cross country Skiing*. Paper presented at the 6th International Symposium, International Society for Biomechanics in Sport, Bozeman, Montana.
- Smith, G. A.** & Nelson, R. C. (1987). *Kinematic Analysis of Alternate Stride Skating in cross country Skiing*. Paper presented at the annual meeting of the American College of Sports Medicine.
- Smith, G.** & Adrian, M. (1984). *Enhancement of Biomechanics Instruction through Computer Simulation*. Paper presented at the 2nd National Symposium on Teaching Kinesiology and Biomechanics in Sports, Colorado Springs, Colorado.

RESEARCH PROPOSALS AND GRANTS:

- Smith, G. A.** (2010). *Strategies with bodies in motion: Using human activities to enhance student interest in physics and biology*. Submitted to the ITEST program of the National Science Foundation for \$1,172,164 (not funded).
- Smith, G.** & Dolny, D. (June, 2009). *Bodies in motion: Using human activities to enhance STEM education*. Funded as a Research Catalyst award from the Research Office of Utah State University for \$20,000.
- Smith, G. A.** & Dorward, J. T. (2009). *Bodies in motion: Using human activities to enhance understanding and interest in science for pre-service teachers*. Submitted to the Course, Curriculum, and Laboratory Improvement program of the National Science Foundation for \$198,704 (not funded).
- Bressel, E., Higbee, T., & **Smith, G.** (2009). *Effect of whole body vibration on repetitive behaviors of children with autism*. Funded as a Research Catalyst award from the Research Office of Utah State University for \$19,077.
- Smith, G. A.** & Korienek, G. (2001). Lower body positive pressure device for force reduction in locomotion rehabilitation. Submitted to the Erkkila Endowment. Requested \$19000, funded \$17050.

- Smith, G. A.** (2000). Digital Video and Computer Instrumentation to Augment Undergraduate Biomechanics Instruction and Laboratory Experiences. Submitted to the Oregon State University Technology Resource Fee Committee. Funded \$9800.
- Smith, G. A. & Yun, J. K.** (2000). *Motion Analysis System Upgrade*. Submitted to the Oregon State University Research Office. Funded \$18,000 from research equipment reserves, \$12,000 from College of Health and Human Performance.
- Smith, G. A.** (1998-2000). *Funding for a Graduate Research Assistant for ASB Web Projects*. American Society of Biomechanics. Submitted to ASB Executive Board. Approved \$2500 each year 1998, 1999, 2000.
- Smith, G. A. & Lawson, L.** (1991-2000). *A Kinematic Analysis of Breast Motion Control afforded by new Sports Bra Designs*. Funded by Champion Jogbra, Inc., Burlington, VT: \$3076 (1991), \$2722 (1992), \$10002 (1993-4), \$4998 (1995), \$9996 (1995-6), \$5002 (1997), \$6334 (1998), \$7071 (1999), \$13994 (2001).
- Korienek, G. & Smith, G.** (1999). *A Clinical Device for the Rehabilitation of Lower Body Injuries using a Pressure Differential Approach to unload a Patient's Lower Extremity*. Submitted to the Erkkila Endowment. Requested \$19,960 funded \$12,000.
- Smith, G. A., Korienek, G. G., McCubbin, J. A., & Widrick, J.** (1999). *Martian Gait: Influence of Mechanics, Metabolic Costs and Muscle Activity Patterns on Astronaut Mission Performance*. Submitted to NASA requesting \$563,754 for three year project. Not funded.
- Smith, G. A.** (1999). *Electronic Publication of Current Biomechanics Research*, Scholarly Publishing & Academic Resources Coalition (SPARC), Scientific Communities Initiative (\$92000), not funded.
- Smith, G. A., Hunter, I., Caster, B. & Killgore, G.** (1999) *Kinematic Analysis and Technique Comparison of Men's and Women's Hammer Throw: Implications for Coaching and Performance*. Medical Commission of the International Olympic Committee, not funded.
- Smith, G. A., Dutto, D. J., & Levy, M.** (1997). *Stroke Mechanics of the Straight to Curve Transition in Speed Skating*. Funded in part by the International Olympic Committee for data collection during the 1998 Winter Olympic Games in Nagano, Japan.
- Smith, G. A. & Shorten, M.** (1997). *Plantar Pressure Distribution during Treadmill Locomotion*. Funded by Nike, Inc., Beaverton, OR: \$2257.
- Smith, G. A.** (1996). *Integration of Multimedia and World Wide Web Materials into Undergraduate Biomechanics Laboratories*. Funded by the Instructional Development and Technology Committee, Oregon State University: \$21,528.
- Smith, G. A. & Rundell, K.** (1996). *Biathlon Skating Kinematics: A Three-Dimensional Comparison of Elite International and US National Team Skier Technique*. Submitted to the United States Olympic Committee Sport Science and Technology Grant Program (\$11,640): not funded.
- Smith G. A. & Levy, M.** (1996). *The Effect of Mountain Bike Suspension Systems on Performance*. Submitted to the United States Olympic Committee Sport Science and Technology Grant Program (\$26,567): not funded.

- Smith, G. A.** (1994). *Lower Extremity Kinematics during the Skating Stroke in Cross-Country Skiing*. Funded by the International Olympic Committee: about \$10000 for housing and transport during the Lillehammer Winter Olympics.
- Fewster, J. & **Smith, G. A.** (1994). *Musculoskeletal Forces in the Walk-Run Transition of Human Locomotion*. Funded by Reebok and the American College of Sports Medicine: \$2500.
- Katsma, D. & **Smith, G. A.** (1993). *Analysis of Needle Path during Intramuscular Injection*. Funded by a Research, Scholarship and Creative Activity Grant from California State University, Stanislaus: \$1071
- Harter, R. A. & **Smith, G. A.** (1992). *Three-dimensional Kinematic Analysis of the Effects of Ankle Prophylactic Devices on the Dynamic Ankle and Subtalar Joint Motions*. Funded by the National Athletic Trainer's Association Research and Education Foundation : \$10904.
- Smith, G. A.** (1992). *Mechanical and Metabolic Energy Changes During the Olympic Marathon Race*. Funded by the International Olympic Committee: about \$5000 for housing and transport during the Barcelona Olympic Games; and the OSU Research Council: \$3406.
- Smith, G. A.** (1992). *Mechanical Power Comparison of Skating and Classic Techniques in Cross Country Ski Racing*. Funded by the International Olympic Committee: about \$10000 for housing and transport during the Albertville Winter Olympics; and the United States Olympic Committee: \$7000.
- Smith, G. A.** (1991). *Kinematic and Energetic Analysis of Selected Track Cycling Events of the Barcelona Olympic Games*. Submitted to Medical Commission of the International Olympic Committee: not funded.
- Smith, G. A.** (1991). *Validation of the Isotechnologies B-200 Analysis Protocol for Assessing Sincerity of Effort in Back Strength Measurement*. Funded by A. M. Sadoff, MD: \$3087.
- Smith, G. A.** (1990). *The Effect of Pole Length on Kinematic and Kinetic Characteristics of Cross Country Ski Technique*. Submitted to Sports Medicine and Sports Science Committee of the U. S. Olympic Committee with budget of \$10230: not funded.
- Smith, G. A.**, Allen, D., Wilcox, A. & Quinn, C. (1990). *A Metabolic, Kinematic and Kinetic Analysis of Running on a Variably Compliant Treadmill Surface*. Submitted to Precor USA, Inc. with a budget of \$11718: not funded.
- Nelson, R. C. & **Smith, G. A.** (1988). *Film-Video comparison of Three Dimensional Direct Linear Transformation Coordinate Predictions*. Funded by Peak Performance Technologies Inc., Colorado Springs, Colorado: \$1000.
- Smith, G. A.** (1988). *Three Dimensional Kinematic Analysis of the 1988 Olympic Cross Country Free Technique Races*. Funded by the United States Olympic Committee: \$6000.
- Morehouse, C. & **Smith, G. A.** (1988). *Impact acceleration measurement: a hardware/software system designed for the measurement of impact accelerations of a vertical track device*. Funded by Carlisle Tire and Rubber Co.: \$7000.

Nelson, R. C. & Smith, G. A. (1987). *Grip strength sincerity of effort assessment: a hardware/software system designed for the collection and analysis of grip strength force-time curves*. Funded by Armin M. Sadoff, MD: \$20000.

Nelson, R. C., McNitt-Gray, J. & Smith, G. A. (1986). *Technique analysis of cross country ski skating*. Funded by the United States Olympic Committee: \$10000.

GRADUATE STUDENT ADVISING:

Major Advisor of: (degree completion year)

Jeremy Bauer, MS (2000)

Thesis: *Kinetics and Kinematics of Prepubertal Children Participating in Osteogenic Physical Activity*

Jennifer A. Beck, MS (1997)

Project: *Relationship of Ground Reaction Forces to Surface Height Changes in Running*

Anne L. C. Boschma, MS (1995)

Thesis: *Breast Support for the Active Woman: Relationship to 3D Kinematics of Running*

Darren Dutto, PhD (2000)

Dissertation: *Leg Spring Model Related to Muscle Activation, Force, and Kinematic Patterns during Endurance Running to Voluntary Exhaustion*

Beate Eltarvåg, MS (2009)

Thesis: *Foot Structure, Rearfoot Motion and Leg Stiffness in Running*

Jonathan B. Fewster, MS (1996)

Thesis: *The Role of Musculoskeletal Forces in the Human Walk-Run Transition*

Koichiro Fujimoto-Kanatani, PhD (1995)

Dissertation: *Determining the Essential Elements of Golf Swings Used by Elite Golfers*

Matthias Gilgien, MS (2008)

Thesis: *External Forces Acting in Direction of Travel and their Relation to Energy Dissipation in Slalom*

Brian S. Heagy, MS (1992)

Thesis: *Kinematic Analysis of Male Olympic Cross-Country Skiers using the Open Field Skating Technique*

Iain Hunter, PhD (2001)

Dissertation: *The Effect of a Near-Maximal Effort One-Hour Run on Preferred and Optimal Stride Rate*

Marjaana Lappi, MS (2009)

Thesis: *The Kinetic Characteristics in Competitive Slalom Skiing*

Ki-Kwang Lee, PhD (1999)

Dissertation: *The Effect of Running Speed and Turning Direction on Lower Extremity Joint Moment*

Morris Levy, PhD (2000)

Dissertation: *Kinetic and Vibration Analysis of Off-Road Bicycle Suspension Systems*

Jermund Lunder, MS (2004)

Thesis: *Kinetic and Kinematic Analysis of Simulated Ski Jump Take-offs on a Simulator Hill*

Marie M. Moltubakk, MS (2007)

Thesis: *The Effects of Long Term Flexibility Training on Running Mechanics and Economy*

Michael Orendurff, MS (1997)

Thesis: *The Effect of Mountain Bicycle Suspension Fork Stiffness on Impact Acceleration*

Adam Raikes, MS (2012)

Thesis: *The Reliability and Diagnostic Accuracy of the yes/no Scapular Dyskinesis Test when used by Graduate Assistant Athletic Trainers*

Robert Reid, PhD (2010)

Dissertation: *Kinematic and Kinetic Study of Alpine Skiing Technique*

Suwat Sidthilaw, PhD (1997)

Dissertation: *Kinetic and Kinematic Analysis of Thai Boxing Roundhouse Kicks*

Nicole L. Shivitz, MS (2001)

Thesis: *Adaptation of Vertical Ground Reaction Force due to Changes in Breast Support in Running*

Øyvind Toftegaard, MS (2010)

Thesis: *Langrenn - modifisering av fristil teknikk under konjurransse [Ski racing - Adaptation of Skating Technique during Competition]*

Pasakorn Watanatada, PhD (2001)

Dissertation: *Comparison of Leg Spring Characteristics during Running using Mass-Spring-Damper Modeling*

Committee Member overseeing Biomechanics component of Thesis/Dissertation:

Sean Clark, PhD (1998)

Dissertation: *Task and Support Surface Constraints on the Coordination and Control of Posture in Older Adults*

Mark Debeliso, PhD (1998)

Dissertation: *The Effects of a Lumbar Support Belt on Radiographic Characteristics of the Lumbosacral Spine*

Kaori Enomoto, MS (1997)

Thesis: *Kinematic and Electromyographic Analysis of Backhand Strokes in Tennis to Predict the Incidence of Lateral Elbow Pain*

Dorte Engle, MS (1996)

Thesis: *A Comparison of Rearfoot Stability in Three Women's Shoe Styles with Different Heel Dimensions*

Andrew J. Fecteau, MS from Pacific University (1992)
Thesis: *The Effects of Rotational Clipless Pedals on Lower Extremity Frontal Plane Kinematics during Stationary Cycling*

Kim Hannigan-Downs, PhD (2004)
Dissertation: *Radiographic Validation and Reliability of Selected Measures of Pronation and Biomechanical Analyses of Tarsal Navicular Displacement under Static and Dynamic Loading Conditions*

Chad Harris, PhD (1995)
Dissertation: *The Influence of Velocity on the Metabolic and Mechanical Task Costs of Treadmill Running*

Lindsay W. Johnson, MS (1992)
Project: *Instrumenting an Exercise Treadmill for Evaluation of Vertical Ground Reaction Forces*

Ryan Jordan, MS (2000)
Thesis: *Influence of Ankle Orthoses on Ankle Joint Motion and Postural Stability Before and After Exercise*

Cheryl A. Juergens, MS (1995)
Thesis: *A Kinetic and Kinematic Comparison of the Grab and Track Starts in Competitive Swimming*

Jane LaRiviere, PhD (2002)
Dissertation: *Specific Loading Protocols to Promote Bone Mineral Density in Young Women*

LaJean Lawson, PhD (1992)
Dissertation: *Chest/Breast Protectors for Female Athletes: Cushioning Properties and Effect on Selected Physiological and Performance Variables*

Tron Moger, MS (2007)
Thesis: *Center of Mass 3-Dimensional Motion in Alpine Slalom Racing*

Håvard Myklebust, MS (2008)
Thesis: *Mekanisk avlastning av muskulatur i skøytestilling med elastisk materiale*

Bruce J. Sandmeyer, MS (1996)
Project: *Simulation of Bat/Ball Impacts Using Finite Element Analysis*

Steve Skaggs, PhD (1995)
Dissertation: *Effects of Seat and Back Rest Inclination on Wheelchair Propulsion of Individuals with Spastic Cerebral Palsy*

Håvard Tjørhom, MS (2007)
Thesis: *Description of the Center of Mass Fore/Aft Motion in Slalom*

Tuula-Maija A. Tyry, PhD (1994)
Dissertation: *The Influence of Perceptual Training on Volleyball Performance Among Adolescent Females*

TEACHING EXPERIENCE:

Undergraduate Courses:

EXSS 323: *Biomechanics of Sports and Exercise*
Department of Exercise and Sport Science, Oregon State University

EXSS 271: *Principles of Computing in Exercise and Sport Science*
Department of Exercise and Sport Science, Oregon State University

EXSS 322: *Anatomical Kinesiology*
Department of Exercise and Sport Science, Oregon State University

EXSS 481: *Analysis of Critical Issues in Exercise and Sport Science*
Department of Exercise and Sport Science, Oregon State University

IBI 220: *Fysikk for idrettsvitenskap (Physics for Sport Science)*
Norwegian School of Sport Science

IBI 223: *Idrettsbiomekanikk (Sport Biomechanics)*
Norwegian School of Sport Science

IBI 303: *Skjelett mekanikk (Skeletal Mechanics)*
Norwegian School of Sport Science

IBI 390: *Fordypningsoppgave (Research Project)*
Norwegian School of Sport Science

Graduate Courses:

EXSS 523: *Biomechanics of Motor Activities*
Department of Exercise and Sport Science, Oregon State University

EXSS 525: *Biomechanics of the Skeletal System*
Department of Exercise and Sport Science, Oregon State University

EXSS 526: *Biomechanical Analysis Techniques*
Department of Exercise and Sport Science, Oregon State University

EXSS 572: *Computer Utilization in Health, Exercise and Sport Science*
Department of Exercise and Sport Science, Oregon State University

EXSS 507/607: *Seminar*
Department of Exercise and Sport Science, Oregon State University

MAS 455: *Biomekanikk og bevegelsesanalyse (Biomechanics and motion analysis)*
Norwegian School of Sport Science

PEP 6700: *Movement Science Seminar*
Department of Health, Physical Education and Recreation, Utah State University

PROFESSIONAL SERVICE

Service within the University:

Oregon State University:

- Graduate Council (1990-1993)
- Curriculum Council (1994-1997)
- Program Review Committees for Departments of Nuclear Engineering (1991), Industrial and Manufacturing Engineering (committee chair, 1992), Mechanical Engineering (1993), Fisheries and Wildlife (1996).
- International Degree Committee (1992-1994)

College of Health and Human Performance, OSU:

- College Computer Committee and network oversight (1990-2000)
- Curriculum Committee (1993-1998)
- College Web Editor (1995-1999)

Department of Exercise and Sport Science, OSU:

- EXSS Personnel Committee (1995-1997), (chair, 1999-2000)
- Grad Admissions Committee (1990-1995)
- Faculty Search Committees: Athletic Training (1990, 1993, 1994, 2000(chair)), Bioengineering (2000).

Norwegian School of Sport Science:

- Leader of Bevegelselære og idretter (Movement and Sport) Section (2002-2004)
- Curriculum Revision of bachelor program (2002-2003)
- Programansvarlig (Curriculum leader) of new Sport Biology program (2003-present)
- Biomechanics consultant for sports medicine section research (2002-present)

Department of Health, Physical Education, and Recreation, Utah State University:

- Faculty Search Committee (2008)
- Departmental thesis reviewer

College of Education & Human Services, Utah State University:

- Science Methods course (Todd Campbell): Speaker and Lab Activity Organizer
- STEM education project 2009 - 2011: Bodies in Motion--Using Biomechanics within Physics Instruction. (6 lessons per year with InTech Collegiate High School Physics class, in collaboration with Stephanie Kawamura.)
- STEM education outreach activities with local schools (lab tours/presentations)
- Research Council review of research proposals and researcher awards

Service outside the University:

- Manuscript Reviewer for *Journal of Applied Biomechanics*, *International Journal of Sport Biomechanics*, *Medicine & Science in Sport & Exercise*, *Research Quarterly*, *Sport Science Review*, *Journal of Applied Physiology*, *Journal of Experimental Biology*, *European Journal of Applied Physiology*, *Human Movement Science*, *Sport Biomechanics*, *Scandinavian Journal of Medicine, Science & Sport*, and *Journal of Sports Science*
- Olypiatoppen–Toppidrettssenter (Norwegian Olympic Training Center): Seminar organization and speaker, consultant on research equipment and projects (2002 – 2008)
- American Society of Biomechanics Executive Board (1996-2000 and 2010-present)
- American Society of Biomechanics chair of Education (2010-present)
- American Society of Biomechanics: organization and review of graduate student grant-in-aid submissions (2011)
- American Society of Biomechanics Web Editor responsible for electronic conference proceedings, electronic newsletters, graduate programs database, ASB listservs, and overall web site (1996-2000).
- American Society of Biomechanics annual meeting program committee (1995).
- Abstract reviewer for annual meeting of ACSM (1994), ASB (1995).
- Journal of Applied Biomechanics Editorial Board (1998-2002).
- Consulting Editor for *Odyssey* biomechanics issue in September 1999. (*Odyssey* is a monthly children's science magazine.)
- National Science Foundation reviewer for division of undergraduate education proposals (July 1999).
- Conference Organizer for the Northwest Regional Conference of the American College of Sports Medicine (1996).
- Conference Organizer for the Nordisk Konferanse om Bevegelsesanalyse (Scandinavian Conference of Motion Analysis) and editor of conference proceedings (2005).
- American College of Sports Medicine: Chair of Science in Winter Sports Interest Group (2010-present), Conference Symposium Proposal Writer, Session Chair at annual conference
- American Society of Biomechanics: Committee member organizing National Biomechanics Week, Coordination STEM education proposal for NSF with ASB
- International Society of Biomechanics in Sports: Applied Biomechanics Session organizer for 2010 conference, Abstract Review for 2010 conference, Scientific Committee for 2010 conference
- *Sports Biomechanics* Journal: Member of the Editorial Board (from 2010)

Appendix D

**Library Program Assessment
John U. Tomlinson Library
Mesa State College**

Date of Assessment: October 2012

Purpose of Assessment: Program Review

Program under review: Kinesiology concentrations: Fitness and Health Promotion, K-12 Teaching, and Adapted Physical Education

Program Level/s: Bachelor of Arts

Librarian: Barbara Borst

1. Collection Assessment

Collection development is the joint responsibility of the Kinesiology faculty and the Kinesiology Librarian. Review slips and new title lists are sent to the faculty each month for their review. Titles recommended are sent to the librarian who reviews them and sends them on for purchase as money allows.

a. Reference Support:

The Reference Collection provides basic support for these concentrations with specialized dictionaries and encyclopedias. Representative titles include:

Churchill Livingstone's Dictionary of Sport & Exercise Science & Medicine (2008)

Education Week Guide to K-12 Terminology (2009)

Encyclopedia of Exercise, Sport and Health (2004)

Encyclopedia of Sport Science. 2 vol. (1997)

Encyclopedia of Sports in America. 2 vol. (2009)

Encyclopedia of the Modern Olympic Movement (2004)

Encyclopedia of World Sport: From Ancient Times to the Present. 3 vol (1996)

Great Athletes. 13 vols. (2009)

Oxford Dictionary of Sports Science & Medicine (2006) (print & online)

Sports Rules Book 3rd ed. (2009)

b. Monographic Sources

The collection was evaluated by doing a combination of keyword, subject and call number searches. Call number areas reviewed were: GV – physical education & sports, QP – sections related to biomechanics and exercise physiology, R – sections related to community and workplace health, fitness,

health promotion, physical activity, and TX section on sport nutrition. Titles were counted by call number area and topic areas. Then they were divided into the four charts below for K-12 teaching and coaching, adapted physical education, fitness and health promotion, and exercise physiology. Titles may be included in more than one concentration area. Additional books on public health and health promotion may be found in the nursing section. Overall, there is a good base upon which to continue building. Charts showing the age of the collection by subject are attached.

- Age Analysis

K-12 Teaching & Coaching	Print	E-book
2010-	24	3
2000-2009	131	
1990-1999	73	
1980-1989	51	
1970-1979	67	
Before 1970	49	
TOTAL	395	3

Adapted Physical Education **	Print	E-book
2010-	2	
2000-2009	20	
1990-1999	8	
1980-1989	8	
1970-1979	20	
Before 1970	6	
TOTAL	64	

** some additional books are available in the individual sports sections

Fitness & Health Promotion	Print	E-book
2010-	25	10
2000-2009	103	10
1990-1999	59	3
1980-1989	44	
1970-1979	22	
Before 1970	13	
TOTAL	266	23

Exercise Physiology	Print	E-book
2010-	20	2
2000-2009	86	4
1990-1999	42	1
1980-1989	33	
1970-1979	29	
Before 1970	15	
TOTAL	225	7

As a partial government depository, the Library also makes available a large number of federal documents published by the Department of Education and the Department of Health. These are available in a variety of formats – paper, microform, CD and online. The ERIC document collection is available in microfiche from 1976-2004 and online since 1993.

c. Periodicals

The Library subscribes to 45 magazines and journals in print (31) and electronic (14) formats that directly support these areas of Kinesiology. The majority of the e-journals support Fitness and Health Promotion. There also may be titles in both Education and Health Science that will have applicable articles. The aggregator databases, such as *SportDiscus* and *Academic Search Complete*, have full text articles from 800-1,000 additional titles. The publishers for some of these titles have placed embargos of 12 or 18 months on the full text.

Current print subscriptions:

ACSM's Health & Fitness Journal 2001-
Adapted Physical Activity Quarterly 2001- (online 1984-)
American Journal of Health Education 2001-
American Journal of Health Promotion Jy 1992-
American Journal of Public Health 1972-
Annual Review of Physiology (QP 1 A535) 1982-
Applied Physiology, Nutrition & Metabolism 2006-
Athletic Administration 1980-
Coach & Athletic Director 1995-
Health (San Francisco) 1992-
Journal of Aging & Physical Activity 2001- (online 1997-)
Journal of Applied Biomechanics 2001 (online 1993-)
Journal of Applied Physiology 1985-
Journal of Community Health 1980-
Journal of Nutrition Education & Behavior 2002-
Journal of Physical Education, Recreation & Dance 1981-
Journal of Sport History 1981-
Journal of Sports Medicine & Physical Fitness 1981-
Journal of Teaching in Physical Education 1984-
Medicine & Science in Sports & Exercise 1992-
Natural Health 1993-
Palaestra 2001-
Pediatric Exercise Science 1994-
Physical Educator 1969-
Research Quarterly for Exercise & Sport 1980-
Sports Illustrated 1967-
Sports 'N Spokes 1985-
Strategies (AAHPERD) 1992-
Strength & Conditioning Journal 1995-
University of California Berkeley Wellness Letter 1991-

Electronic journals available through publisher's package subscriptions

Disability and Rehabilitation 1997- (Informa)
European Physical Education Review 1999- (Sage)
Global Health Promotion 1999- (Sage)

Health Education & Behavior 1999- (Sage)
Health Education Journal 1999- (Sage)
Health Promotion Practice 1999- (Sage)
Indoor Air 1997- (Wiley)
Indoor and Built Environment 1999- (Sage)
Journal of Aging and Health 1999- (Sage)
Journal of Human Nutrition and Dietetics 1997- (Wiley)
Nutrition and Dietetics 2005- (Wiley)
Nutrition Reviews 1997- (Wiley)
Perspectives in Public Health 1999- (Sage)
Zoonoses and Public Health 1999- (Wiley)

Representative titles from the aggregator databases: (embargo period)

Advances in Physical Education 2011-
Archives of Environmental & Occupational Health 2005- (18 month)
European Journal of Adapted Physical Activity 2008-
Health Promotion International 2008- (12 month)
International Journal of Disability Development Education 1999- (18 month)
Measurement in Physical Education & Exercise Science 1997-
Physical Education & Sport Pedagogy 2004- (18 month)
Quest (Champaign) 1964- (12 month)
Work 1999- (12 month)

d. Electronic Resources

Indexes for journal articles:

SportDiscus with Full Text
Education Research Complete
ERIC
CINAHL
Medline
Academic Search Complete
OmniFile Full Text Select

e. Media

The Library media collection includes videos in both VHS and DVD formats recommended for purchase by the faculty. Both formats are available for classroom use and student/faculty checkout. There are about 100 titles available for these areas of Kinesiology. In addition, the Library also has a small collection of Popular Movies some of which pertain to sports and society. Representative titles include:

Dan Gable's Wrestling Essentials (2005) (DVD)
Decreasing the Risk of Eating Disorders among Athletes (1999) (VHS)
Eat to Win: Nutrition for Athletes (2006) (DVD)

Introduction to Adapted Aquatics (2005) (DVD)
No More Dodgeball: The New Phys Ed in Michigan Schools (1997) (VHS)
Physical Education: Who Needs It? Why Study It? (1995) (VHS)
Special Olympics: SO Get Into It (2002) (DVD)
Spotlight on Careers in Fitness and Sports (2007) (DVD)
Sports Nutrition Essentials (2006) (DVD)
Steroid Abuse: Win Now, Lose Later (2003) (VHS)
Wheelchair Athletes (1996) (VHS)
Rocky (Popular Movie)

2. Evaluation of the total collection

a. Strengths

1. Currency – At least 1/3 of the collection for each concentration area has been published since 2000.
2. Current growth is strong for K-12 teaching and Fitness & health promotion concentrations and moderately strong for Adapted PE.
3. Media collection is varied providing support for many topics.
4. There is a strong collection of books on teaching and techniques for sports and activities that would be useful to the K-12 teacher.

b. Weaknesses

1. Adapted PE is the weakest area with less than 100 books.
2. Subject areas that are weak include health promotion and community health.
3. Participation of faculty in selection process – most of the recommendations come from 2 professors.

3. Recommendations

- a. Give higher priority to the purchase of materials in the weak areas – Adapted PE, health promotion and community health.
- b. Consult departmental faculty about replacing the videos in VHS format with the DVD format since the campus IT department is no longer supporting the VHS format.
- c. Purchase e-books whenever possible to increase student access “beyond the walls”.
- d. Encourage greater faculty participation in the selection of materials.
- e. Review pre-1990 materials for continued relevance to the program. Identify titles that should be kept – core, historical, and still current titles – and those that need to be withdrawn.

Library Director: Sarah Cron Date: 10/26/12

Subject Area Collection Maps

Sport History	Print	E-book
2010-	25	5
2000-2009	50	
1990-1999	34	
1980-1989	33	
1970-1979	47	
Before 1970	22	
TOTAL	211	5

Philosophy & Ethics	Print	E-book
2010-	11	1
2000-2009	20	
1990-1999	5	
1980-1989	3	
1970-1979	9	
Before 1970	5	
TOTAL	53	1

Sport & Society	Print	E-book
2010-	5	
2000-2009	22	
1990-1999	10	
1980-1989	12	
1970-1979	6	
Before 1970		
TOTAL	55	

Sport Careers	Print	E-book
2010-	4	
2000-2009	3	
1990-1999	2	
1980-1989	1	
1970-1979	1	
Before 1970		
TOTAL	11	

Sport Psychology	Print	E-book
2010-	5	1
2000-2009	17	
1990-1999	11	
1980-1989	5	
1970-1979	3	
Before 1970		
TOTAL	41	1

Women's Sports	Print	E-book
2010-	1	
2000-2009	14	1
1990-1999	9	
1980-1989	7	
1970-1979	7	
Before 1970	4	
TOTAL	42	1

Sports Law	Print	E-book
2010-	2	3
2000-2009	13	
1990-1999	8	
1980-1989	4	1
1970-1979	3	
Before 1970	1	
TOTAL	31	4

Sports Nutrition	Print	E-book
2010-	6	
2000-2009	24	8
1990-1999	13	1
1980-1989	11	
1970-1979	8	
Before 1970	3	
TOTAL	65	

Coaching & Officiating	Print	E-book
2010-	3	2
2000-2009	14	
1990-1999	4	
1980-1989	4	
1970-1979	7	
Before 1970	5	
TOTAL	37	2

Sports & Activities	Print	E-book
2010-	45	10
2000-2009	179	
1990-1999	106	
1980-1989	191	
1970-1979	230	
Before 1970	190	
TOTAL	941	10

Biomechanics	Print	E-book
2010-	9	1
2000-2009	24	
1990-1999	12	
1980-1989	11	
1970-1979	5	
Before 1970	1	
TOTAL	62	1

Exercise Physiology	Print	E-book
2010-	6	1
2000-2009	37	4
1990-1999	13	
1980-1989	6	
1970-1979	4	
Before 1970	10	
TOTAL	76	5

Exercise	Print	E-book
2010-	5	
2000-2009	25	
1990-1999	14	
1980-1989	19	
1970-1979	19	
Before 1970	7	
TOTAL	89	

Community Health	Print	E-book
2010-		
2000-2009	1	
1990-1999	6	1
1980-1989	4	
1970-1979	3	
Before 1970	7	
TOTAL	21	1

Health Promotion	Print	E-book
2010-		
2000-2009	11	7
1990-1999	7	2
1980-1989	1	
1970-1979		
Before 1970		
TOTAL	19	9

Olympic Games	Print	E-book
2010-	7	2
2000-2009	21	
1990-1999	4	
1980-1989	1	
1970-1979	5	
Before 1970	7	
TOTAL	45	2

Appendix E

Bachelor of Arts: Adapted Physical Education

MATRIX I: Identifying a Program's Student Learning Outcomes

Where/when should they learn it? (Course list / groupings (level?))		What should students know/be able to do?				
		SLO 1	SLO 2	SLO 3	SLO 4	SLO 5
BIOL	209 Human Anatomy and Physiology	X				
BIOL	209L Human Anatomy and Physiology Lab	X				
FLSL	111 American Sign Language I				X	
FLSL	112 American Sign Language II				X	
KINE	100 Health and Wellness	X		X		
KINE	200 History & Philosophy of Sport & Physical Education			X		
KINE	211 Methods of Lifetime, Individual & Dual Activities		X	X	X	X
KINE	213 Applications of Physical Fitness & Exercise Prescription			X	X	X
KINE	234 Prevention and Care of Athletic Injuries			X		X
KINE	250 Lifeguard Training	X		X		
KINE	251 Water Safety Instructor		X	X		X
KINE	265 First Aid and CPR for the Professional Rescuer	X		X		
KINE	301 Tests and Measurements			X		X
KINE	303 Exercise Physiology	X		X	X	X
KINE	309 Anatomical Kinesiology	X		X	X	X
KINE	360 Motor Learning		X		X	X
KINE	401 Org/Ad/Legal Considerations of PE and Sports	X		X		
KINE	415 Physical Activity & Aging				X	X
KINE	480 Inclusive Physical Activity				X	X
KINE	494 Senior Seminar (Capstone)	X	X	X		
KINE	499 Internship			X	X	
KINE	303L Exercise Physiology Lab	X		X	X	X
KINE	309L Anatomical Kinesiology Lab	X		X	X	X
PSYC	233 Human Growth and Development		X			
PSYC	340 Abnormal Psychology.				X	

Bachelor of Arts: Fitness and Health Promotion

MATRIX I: Identifying a Program's Student Learning Outcomes

Where/when should they learn it? (Course list / groupings (level?))		What should students know/be able to do?					
		SLO 1	SLO 2	SLO 3	SLO 4	SLO 5	SLO 6
BIOL	203 Human Nutrition			X			
BIOL	209 Human Anat and Physiology	X	X				
BIOL	209L Human Anat & Physiology Lab	X	X				
KINA	1XX Activity				X		X
KINA	1XX Activity				X		X
KINE	100 Health and Wellness	X		X	X		X
KINE	200 History & Philosophy of Sport & Physical Education						
KINE	213 Applications of Physical Fitness and Exercise Prescription			X	X		X
KINE	234 Prevention and Care of Athletic Injuries				X		
KINE	250 Lifeguard Training				X		
KINE	260 School and Personal Health	X	X	X	X		
KINE	265 First Aid and CPR for the Professional Rescuer				X		
KINE	297 Practicum						
KINE	301 Tests & Measurements in Sport & Physical Education			X	X	X	X
KINE	303 Exercise Physiology	X	X	X	X	X	X
KINE	309 Anatomical Kinesiology	X	X			X	
KINE	333 Community Health		X	X			
KINE	370 Biomechanics		X			X	
KINE	401 Org/Ad/Legal Considerations of PE and Sports						
KINE	403 Preparation for Strength and Cond Certificate					X	
KINE	404 Preparation for ACSM HFS Certificate	X	X	X		X	X
KINE	405 Sports Nutrition			X		X	
KINE	411 Worksite Health Promotion		X	X			X
KINE	415 Physical Activity & Aging		X	X	X		X
KINE	430 Medical Conditions and Pharmacology in Sports				X		
KINE	480 Inclusive Physical Activity				X		X
KINE	487 Structured Research					X	
KINE	494 Senior Seminar (Capstone)						X
KINE	499 Internship						
KINE	303L Exercise Physiology Lab	X	X		X	X	
KINE	309L Anatomical Kinesiology Lab					X	
KINE	370L Biomechanics Lab		X			X	

Bachelor of Arts: K-12 Teaching

MATRIX I: Identifying a Program's Student Learning Outcomes

Where/when should they learn it? (Course list / groupings (level?))		What should students know/be able to do?					
		SLO 1	SLO 2	SLO 3	SLO 4	SLO 5	SLO 6
BIOL	209 Human Anatomy and Physiology	X					X
BIOL	209L Human Anatomy and Physiology Lab	X					X
EDUC	211 Foundations of Education	X					X
EDUC	342 Pedagogy & Assessment: Secondary/K-12			X	X	X	X
EDUC	343 Teaching to Diversity			X	X	X	X
EDUC	499D Teaching Internship/Colloq.: Elementary	X	X	X	X	X	X
EDUC	499H Teaching Internship/Colloq.: Secondary	X	X	X	X	X	X
ENGL	111 English Composition				X		X
ENGL	112 English Composition				X		X
KINA	101 Beginning Swimming	X	X		X		X
KINA	102 Intermediate Swimming	X	X		X		X
KINA	1XX Activity	X	X		X		X
KINA	1XX Activity	X	X		X		X
KINE	100 Health and Wellness		X				X
KINE	200 Hist. & Philosophy of Sport & Physical Education	X			X		X
KINE	211 Methods of Lifetime, Individual & Dual Activities	X	X	X	X	X	X
KINE	213 Applications of Physical Fitness & Exercise Prescription	X	X	X	X	X	X
KINE	214 Methods of Team Activities		X	X	X	X	X
KINE	220 Methods of Dance and Gymnastics	X	X	X	X	X	X
KINE	234 Prevention & Care of Athletic Injuries				X		X
KINE	250 Lifeguard Training	X	X	X	X		X
KINE	251 Water Safety Instructor Course	X	X	X	X		X
KINE	256 Creative Play and Literacy	X	X	X	X	X	X
KINE	260 School and Personal Health	X		X	X		X
KINE	265 First Aid and CPR for the Professional Rescuer				X		X
KINE	301 Tests and Measurements in	X		X	X	X	X
KINE	303 Exercise Physiology	X			X		X
KINE	303L Exercise Physiology Lab	X			X		X
KINE	309 Anatomical Kinesiology	X			X		X
KINE	309L Anatomical Kinesiology Lab	X			X		X
KINE	320 Methods of Teaching Elementary PE Sport & Physical Education	X	X	X	X	X	X
KINE	360 Motor Learning	X	X	X		X	X
KINE	401 Org./Ad./Legal Considerations of PE and Sports	X			X		X
KINE	408 Methods of Teaching Secondary PE	X	X	X	X	X	X
KINE	480 Inclusive Physical Activity	X		X	X		X
KINE	494 Senior Seminar (Capstone)	X		X	X		X
KINE	497 Pre-Internship in Physical Education	X	X	X	X	X	X
PSYC	233 Human Growth and Development	X			X		X
SPCH	102 Speechmaking				X		X

Appendix F

August 12, 2012

Dear Graduate/Alumni:

The Department of Kinesiology at Colorado Mesa University / Mesa State College would like to congratulate you on the completion of your degree. We hope that your time at CMU/MSC has inspired you and built the foundation for continued learning. We wish you the best of everything as you move into a new phase of life, building on what you have learned and enriching the lives of those in your circle of influence.

As you continue on your pathway to achieving your dreams, please stay connected with us. Our email addresses are listed below, and we look forward to hearing from you about your successes and accomplishments.

If you would please go to the following link and spend a few minutes answering our survey questions honestly and accurately, we'd greatly appreciate it.

<http://www.coloradomesa.edu/kinesiology/gradinfo.html>

Congratulations again on reaching this significant milestone.

Sincerely,



Dr. Jill Cordova

Department of Kinesiology – Head

Dr. Richard Bell rbell@coloradomesa.edu
Dr. Jill Cordova jcordova@coloradomesa.edu
Dr. Keith Fritz kfritz@coloradomesa.edu
Dr. Gig Leadbetter gleadbet@coloradomesa.edu
Geana Gaasch ggaasch@coloradomesa.edu

Dr. Steven R. Murray smurray@coloradomesa.edu
Robert Ryan rryan@coloradomesa.edu
Dr. Kristin Heumann kheumann@coloradomesa.edu
Dr. Elizabeth Sharp esharp@coloradomesa.edu
Dr. Gerald Smith geasmith@coloradomesa.edu

Appendix G

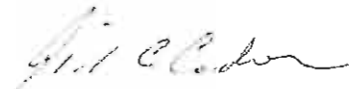
May 1, 2012

EMPLOYER SURVEY

Dear Employer:

Would you please kindly complete the following survey? This brief survey helps us assess and evaluate the effectiveness of our Department of Kinesiology academic program in preparing students for employment. I want to thank you for your willingness to help us. For your convenience in returning the survey to us, the reverse side of this survey is printed with our return address and our postage-paid permit.

Sincerely,



Dr. Jill Cordova
Head, Department of Kinesiology
jcordova@coloradomesa.edu

Name of your organization/company: _____

Contact Info (Name &/or Email) _____

Approximately how many students with majors in the Department of Kinesiology from Colorado Mesa University/Mesa State College have you supervised in the last four years? _____

How would you rate the overall performance of these intern/employees?

☐ Very Satisfactory☐ Satisfactory☐ Unsatisfactory

Please comment on the intern/employees' strengths:

Please comment on the intern/employees' weaknesses:

Please comment on your current impression of the Colorado Mesa University Department of Kinesiology:

Appendix H

PROGRAM ASSESSMENT PLAN

Kinesiology
(Instructional Degree Program)

B.A./B.S.
(Degree Level)

2007-2011
(Assessment Period Covered)

02 October 2007
(Date Submitted)

Submitted By: Dr. Jill Cordova, Head, Department of Kinesiology
(Department Head or Faculty Assessment Representative)

Expanded Statement of Institutional Purpose Linkage:

Institutional Mission / College Goals Reference:

“Mesa State College shall offer liberal arts and science programs and a limited number of professional, technical and graduate programs . . . the Mesa State College community aspires to provide an environment which promotes a wellness lifestyle.”

“By promoting the acquisition of skills as well as the discovery and application of knowledge, the college develops the intellectual, ethical, and aesthetic sensibilities that enable a student to pursue a rewarding career and assume a responsible and productive roles in society.

Intended Educational (Student) Outcomes:

1. Graduates shall demonstrate the knowledge and skills needed to succeed in careers within the field.

2. Graduates shall demonstrate knowledge and skills needed to be successful in graduate/professional programs within the field.

3. Graduates shall pass standardized examinations (i.e., NATABOC national board examination, PLACE assessment and departmental examination).

(Please Copy and Paste to create space for additional Student Outcomes, if needed)

Intended Educational (Student) Outcome #1:

Graduates shall demonstrate the knowledge and skills needed to succeed in careers within the field.

First Means of Program Assessment for Outcome #1:**1a. Means of Program Assessment and Criteria for Success:**

Employers of alumni shall be surveyed annually, with 90 percent reporting that our graduates demonstrate the necessary knowledge and skills needed for success in the career “very satisfactory” or “satisfactory.”

Second Means of Assessment for Outcome #1:**1b. Means of Program Assessment and Criteria for Success:**

Alumni shall be surveyed annually, with 90 percent indicating that their degree program “very satisfactory” or “satisfactory” gave them the knowledge and skills necessary for success in the field.

Third Means of Assessment for Outcome #1:**1c. Means of Program Assessment and Criteria for Success:**

Graduates of all concentrations shall pass their concentration-specific section of the exit examination with answering 70 percent of the questions correctly.

Intended Educational (Student) Outcome #2:

Graduates shall demonstrate knowledge and skills needed to be successful in graduate/professional programs within the field.

First Means of Assessment for Outcome #2:**2a. Means of Program Assessment and Criteria for Success:**

Graduates of all concentrations shall take the departmental core exit examination and answer 70 percent of the questions correctly

Second Means of Assessment for Outcome #2:

2b. Means of Program Assessment and Criteria for Success:

The number of students accepted into graduate/professional school shall be assessed annually, with at least 75 percent of those who apply being accepted.

Intended Educational (Student) Outcome #3:

Graduates shall pass standardized examinations (i.e., NATABOC national board examination and the PLACE assessment).

First Means of Assessment for Outcome #3:

3a. Means of Program Assessment and Criteria for Success:

Graduates of athletic training concentration shall take the NATABOC national board examination, with 50 percent passing on the first try. By the third try, 75 percent of all graduates shall have passed.

Second Means of Assessment for Outcome #3:

3a. Means of Program Assessment and Criteria for Success:

Graduates of the teaching concentration shall take the PLACE assessments administered by the Colorado Department of Education, with 75 percent passing the examination on the initial attempt. By the third attempt, 90 percent of all graduates shall have passed the examination

Significant Program Review challenges and recommendations:

- 1) Additional full-time faculty needed for program growth
- 2) Renewed need for development of departmental annuals goals
- 3) Need for increased faculty development and attendance at regional and national conferences
- 4) Need to enhance student testing, placement and communication with Teacher Education
- 5) Need for enhanced advising sessions with students
- 6) Exit exam—specifically, improving K-12 results
- 7) Need for development of assessment data for next NASPE and NCATE review
- 8) Need for more laboratory space and equipment

Proposed strategies to address challenges and recommendations:

- 1) The department has one new approved position—Athletic Clinical Coordinator. We plan to put in one or two position requests this fall
- 2) Departmental goals will be developed each Fall semester
- 3) The recent implementation of the faculty development funds from academic affairs will help increase the attendance of our faculty at national and international conferences
- 4) We have already met with Teacher Education to discuss increased communication and proper student placement procedures
- 5) Faculty regularly meet with many of our kinesiology advisees. We are considering open advising days as well
- 6) In spring 2007 75% (n=7) of the K-12 Teaching students passed their concentration specific area
- 7) We are in the process of trying to gather data and organize summative and formative assessments for the K-12 Teaching concentration
- 8) We have recently received a donation for increased laboratory equipment. Our new facility should be finished in the next two years

**MESA STATE COLLEGE
PROGRAM ASSESSMENT PLAN - Feedback**

Program: _Kinesiology **Degree:** BA/BS

Year of Plan: 2007-2011

Date of this review: 13 November 2007 **Reviewers:** Bell/Becker

The following items have been addressed in this program's Assessment Plan:

PART 1 – Institutional Mission Reference

Selected objectives are linked to statements found in the Expanded Role and Mission Statement, the Academic Master Plan, or the Vision Statement for Mesa State College.

Yes XX No _____

Comments:

PART 2 – Intended Educational (Student) Outcome Statements

Three to five intended outcome statements will be assessed.

Yes XXX No _____

Comments:

Each objective uses simple language and is phrased with action verbs that identify observable, realistic, and attainable behaviors.

Yes XXX No _____

Comments:

Each objective describes a learning outcome in terms of what the students or graduates would be able to think, know, or do as a result of completing the program.

Yes XXX No _____

Comments:

PART 3 – Means of Assessment and Criteria for Success

Two means of appropriate assessment address specific measurable student behaviors have been utilized for each intended outcome.

Yes XXX No _____

Comments:

Relevant criteria for success have been established and are clearly stated.

Yes XXX No _____

Comments:

Significant program review challenges and recommendations are listed.

Yes XXX No_____

Comments:

Proposed strategies to address significant program review challenges and recommendations are included.

Yes XXX No_____

Comments:

PROGRAM ASSESSMENT PROGRESS REPORT

Kinesiology
(Instructional Degree Program)

B.A./B.S.
(Degree Level)

2007-2011
(Assessment Period Covered)

12 November 2010
(Date Submitted)

Submitted By: **Dr. Jill Cordova, Head, Department of Kinesiology**
(Department Head or Faculty Assessment Representative)

Expanded Statement of Institutional Purpose Linkage:

Institutional Mission / College Goals Reference:

“Mesa State College shall offer liberal arts and science programs and a limited number of professional, technical and graduate programs...the Mesa State College community aspires to provide an environment which promotes a wellness lifestyle.”

“By promoting the acquisition of skills as well as the discovery and application of knowledge, the college develops the intellectual, ethical, and aesthetic sensibilities that enable a student to pursue a rewarding career and assume a responsible and productive role in society.”

Intended Educational (Student) Outcomes:

1. Graduates shall demonstrate the knowledge and skills needed to succeed in careers within the field.

2. Graduates shall demonstrate knowledge and skills needed to be successful in graduate/profession programs within the field.

3. Graduates shall pass standardized examinations (i.e., NATABOC national board examination, PLACE assessment and departmental examination).

(Please Copy and Paste to create space for additional Student Outcomes, if needed)

Intended Educational (Student) Outcome #1:

Graduates shall demonstrate the knowledge and skills needed to succeed in careers within the field.

First Means of Program Assessment for Outcome #1:**1a. Means of Program Assessment and Criteria for Success**

Employers of alumni shall be surveyed annually, with 90 percent reporting that our graduates demonstrate the necessary knowledge and skills needed for success in the career “very satisfactory” or “satisfactory.”

1b. Summarize the Progress made in Collecting Assessment Data:

We have surveyed employers of our alumni semi-annually and have had a fairly good response rate.

Second Means of Assessment for Outcome #1:**1a. Means of Program Assessment and Criteria for Success**

Alumni shall be surveyed annually, with 90 percent indicating that their degree program “very satisfactory” or “satisfactory” gave them the knowledge and skills necessary for success in the field.

1b. Summarize the Progress made in Collecting Assessment Data:

We have surveyed our alumni annually and have had a fairly good response rate.

Third Means of Assessment for Outcome #1:**1a. Means of Program Assessment and Criteria for Success**

Graduates of all concentrations shall pass their concentration-specific section of the exit examination with answering 70 percent of the questions correctly.

1b. Summarize the Progress made in Collecting Assessment Data:

We have had all of our Kinesiology, Athletic Training, and Sport Management majors complete their concentration – specific exit exam during their senior year.

Intended Educational (Student) Outcome #2:

Graduates shall demonstrate knowledge and skills needed to be successful in graduate/professional programs within the field.

First Means of Assessment for Outcome #2:**2a. Means of Program Assessment and Criteria for Success**

Graduates of all concentrations shall take the departmental core exit examination and answer 70 percent of the questions correctly

2b. Summarize the Progress made in Collecting Assessment Data:

We have had all of our Kinesiology, Athletic Training, and Sport Management majors complete their core exit exam during their senior year.

Second Means of Assessment for Outcome #2:**2a. Means of Program Assessment and Criteria for Success**

The number of students accepted into graduate/professional school shall be assessed annually, with at least 75 percent of those who apply being accepted.

2b. Summarize the Progress made in Collecting Assessment Data:

We have been tracking our student's acceptance success in graduate/professional programs annually.

Intended Educational (Student) Outcome #3:

Graduates shall pass standardized examinations (i.e., NATABOC national board examination and the PLACE assessment).

First Means of Assessment for Outcome #3:**3a. Means of Program Assessment and Criteria for Success**

Graduates of athletic training concentration shall take the NATABOC national board examination, with 50 percent passing on the first try. By the third try, 75 percent of all graduates shall have passed.

3b. Summarize the Progress made in Collecting Assessment Data:

We have been tracking student success in passing the NATABOC exam annually.

Second Means of Assessment for Outcome #3:

3a. Means of Program Assessment and Criteria for Success

Graduates of the teaching concentration shall take the PLACE assessments administered by the Colorado Department of Education, with 75 percent passing the examination on the initial attempt. By the third attempt, 90 percent of all graduates shall have passed the examination

3b. Summarize the Progress made in Collecting Assessment Data:

We have been tracking student success in passing the PLACE exam annually.

Please summarize progress made in addressing significant issues/problems that came up during the last Program Review.

1. We have been approved for one additional full-time faculty member to help with program growth.
2. We have enhanced our communication with the Center for Teacher Education.
3. We have increased our advising sessions with students.
4. Our Exit Exam scores have improved.
5. We have developed new assessment materials and data collection for NASPE/NCATE Accreditation.
6. We have a new Human Performance Laboratory with state-of-the-art equipment and two new administrative positions.

**MESA STATE COLLEGE
PROGRAM ASSESSMENT PROGRESS REPORT - Feedback**

Program: Kinesiology Degree BA/BS

Year of Plan: 2007-2011

Date of this review: 12/3/2010 Reviewers Suzanne Lay
Denis Thibodeau

The following items have been addressed in this program's Assessment Plan:

PART 1 – Institutional Mission Reference

Selected objectives are linked to statements found in the Expanded Role and Mission Statement, the Academic Master Plan, or the Vision Statement for Mesa State College.

Yes X No

Comments:

PART 2 – Intended Educational (Student) Outcome Statements

Three to five intended outcome statements will be assessed.

Yes X No

Comments:

Each objective uses simple language and is phrased with action verbs that identify observable, realistic, and attainable behaviors.

Yes X No

Comments:

Each objective describes a learning outcome in terms of what the students or graduates would be able to think, know, or do as a result of completing the program.

Yes___X___ No___

Comments:

PART 3 – Means of Assessment and Criteria for Success

Two means of appropriate assessment address specific measurable student behaviors have been utilized for each intended outcome.

Yes___X___ No___

Comments:

Relevant criteria for success have been established and are clearly stated.

Yes___X___ No___

Comments:

There is a summarizing statement for each mean of assessment describing progress made in data collection.

Yes___ No___X___

Comments: The assessment results seem vague. What is a "fairly good response?" Students took the exit exam, but did they get 70% correct or not? No results indicated.

There is a statement summarizing progress made in addressing significant issues/problems that came up during the last Program Review.

Yes___X___ No_____

Comments: There is a statement, but since the results were not given, it is not clear what the significant issues/problems were.

External Review Report

Colorado Mesa University, Department of Kinesiology

Programs: Bachelor of Arts in Kinesiology & Bachelor of Science in Sport Management

Review Conducted by: Dr. James C. Hannon, University of Utah

a. Narrative

The Department of Kinesiology, as stated in their self study, currently has over 900 majors with 400 in the B.A. in Kinesiology program and 289 in the B.S. in Sport Management program. Given the size of the department relative to the number of faculty, the quality of teaching and dedication to student's success is commendable. This year has been especially burdensome given the unexpected passing of one member of the faculty and another on sabbatical.

During my visit I had the opportunity to observe and interview students in one K-12 teaching class and one fitness and health promotion class. Both professors used highly interactive teaching styles and communicated well with their students. The K-12 lesson focus was low budget activity ideas in P.E. and was very practical and hands-on. Some sample activities were interdisciplinary (i.e. infusing math and nutrition concepts). The teacher engaged the students through extensive questioning throughout the lesson and modeled effective teaching behaviors. The fitness and health promotion class included an exam review and the start of a new lecture topic. My presence cut the professor short of completing the lesson. In reviewing the exam the professor used questioning in order to get the students to identify correct answers from those questions most commonly missed. The professor also asked the students about their hands-on project of getting people to use the stairs instead of the elevator. Student satisfaction with the department was clearly evident. The students find the professors to be great at communicating and they feel a strong personal connection to the professors. The students see the professors within the department as caring for them. The students believe that they receive a great deal of hands on experiences in order to apply what they have learned in real life settings. The students value and appreciate these opportunities. Many indicated that the new Human Performance Laboratory has been very helpful for learning experiences. The students indicated that they feel appropriately challenged as they progress from lower division to upper divisions classes. They expressed that the course objectives link directly to the assignments and tests/quizzes given in their classes. They also said that some professors will actually provide advanced feedback on assignments and that all professors are prompt to respond to questions via email. One area of improvement that was noted by the students was that the professors could collaborate more to be sure connections are being made from class to class. This comment aligns with the American Kinesiology

Associations (2009) position that the Kinesiology core be arranged and developed in a cross-disciplinary manner.

I did not get to observe a Sport Management class being taught. This was primarily due to timing since no classes were being taught during my site visit. I did receive the opportunity to review a few online course offerings. I viewed the content of one hybrid class and one fully online class. I errantly did not note the class titles. The hybrid class appeared appropriate relative to content. It seemed that the online portion was generally constructed to support the in-class portion. The fully online class also seemed to be developed using appropriate content and assessments. It was difficult to properly evaluate the classes without the professors to consult with. Based on what I could view I did feel that some additional aspects of effective online education could be incorporated. For instance, I did not see evidence of the use of live online chat, the streaming of videos, or any voice over's included in the PowerPoint slides. These methods may in fact be used, but I did not see them in my browsing of the courses.

I asked students about advising which is delivered by the faculty as opposed to a professional advisor. The students indicated that the faculty advisors make a great deal of time for them and tailor programs of study to individual student needs. They also said that the faculty advisors are honest with them about career goals. A few students said you only get career advice if you specifically ask about it and that it would be nice to learn about a wider range of career options. Given the high advising load of the faculty, I think they are doing a commendable job and that the current enrollment justifies the hiring of a departmental professional advisor to spend more time with students regarding career counseling.

I found the departmental climate among the faculty to be very positive. It was expressed that everyone works well together and that there was no infighting. It was also expressed that the departmental leadership protects and takes care of the faculty. The teaching loads are viewed as appropriate, with large, but manageable class sizes. In fact, the department has experienced heavy growth in enrollment without a subsequent increase in faculty lines. It was widely expressed that there is too much committee work and that junior faculty are on too many committees. This is detrimental to junior faculty development and is not always good for committees to have inexperienced members. Travel for presenting and professional development is provided through the department (\$600 per year) and central University funds which must be applied for. Overall, although the faculty has a positive outlook, I feel that there is too much of a workload on the faculty. I am concerned that some members could experience burnout resulting in turnover. The load consists of 60% teaching. Research, service and advising have differential loading with no less than 5% in one category. Pre-tenured faculty must generally publish one article per year, but there are no specific criteria. I feel the department needs more faculty and advising support in order to continue to grow and to appropriately cultivate the successful development of junior faculty. I also think that

\$600 is not enough travel support given that additional money from the University is not guaranteed. The department may want to consider increasing this amount, particularly for junior faculty members.

An area of particular strength for the department and programs is in the area of facilities. The Monfort Family Human Performance Laboratory is likely one of the best facilities West of the Rocky Mountains. This facility holds tremendous potential as an educational and undergraduate and faculty research hub for the department. In addition, the shared activity spaces with athletics and recreation within the Maverick Center provide ample space for effective programming. The classrooms are all smart classrooms and appeared in good condition. I was informed that the projectors are about 3 years old. The faculty office spaces appeared to be in good condition and provided a healthy work environment. As the department continues to grow and if more faculty lines are added in the future, additional space may become a priority.

Based on the self study and meeting with the librarians it is apparent that better communication is needed between members of the faculty and the library. Only a few professors communicate their needs. The library has been working to replace the most heavily used VHS tapes to DVD format, but this could be aided by better lines of communication. The department may also consider discipline specific orientations to the library for students so they are better aware of the resources available to them. A fund is available for each department which can be used for new materials. It seems that more e-books are needed in the areas of sport management and adapted P.E. I was surprised to learn that the library does not provide access to PubMed. I think this should be a priority and is of vital importance to the Kinesiology program.

A major area of concern for the department is IT support. This is primarily related to the delivery of online education. Online education is a major component of the Sport Management program which offers an extensive amount of hybrid and fully online classes. Better infrastructure on campus is needed to deliver more extensive and educationally effective online programming. There is no ability to stream videos leaving faculty to individually find outside sources to meet this need. Additional support which would aid faculty to record lectures would be beneficial.

Student learning outcomes (SLO's) and assessment is an area of high importance to the University. There was some misunderstanding regarding the SLO's initially which resulted in some push back by the department, however the assessment office says the department is currently one of the most compliant on campus. The department and program areas have been involved in this process and have created learning outcomes. The SLO's need some refinement. According to the assessment office the SLO's are at a basic level in Blooms Taxonomy, and need higher order development. However, the immediate next step is assessment and templates were just distributed for this phase. What is important to recognize is that assessment is an on-going process and has been conducted by the faculty, there is just a need to better track these assessments. To date,

the department has been using Alumni surveys, employer surveys; sport management exits exams, kinesiology exit exams, and the PLACE test (K-12 teaching licensure exam) as forms of assessment. In addition, sport management and kinesiology have an advisory council, use internship feedback and course evaluations as other sources of indirect assessment. Kinesiology also uses K-12 teacher portfolios. As the department works with the campus assessment office and director more in the coming year, they will enhance their assessment procedures to be sure they are directly aligned with their stated SLO's.

Finally, programs accreditation is something the department should invest time in considering. There are both pros and cons to accreditation, but it is a sign of program quality and an advertising point. The K-12 Teaching emphasis in Kinesiology did obtain NCATE accreditation. In my work on the University Teacher Education Programs Committee at my University, I am aware that NCATE and TEAC have combined into one new organization called, The Council for the Accreditation of Teacher Education (CAEP). CAEP will likely adopt the NCATE standards for physical education given that TEAC did not have standards. At this point the future is uncertain, but the department might want to stay on top of these developments if CMU aligns with CAEP at some point in the future. The Kinesiology self-study states that the Fitness and Health Promotion concentration is designed to align with the National Commission for Health Education Credentialing (NCHEC) guidelines. Given that the program is already aligned with the guidelines it would be advisable to seek out accreditation. The program may also consider being recognized by the National Strength and Conditioning Association (NCSA) and requiring that their students sit for the NCSA-CSCS or ACSM-HFI examination prior to graduation as an additional marker of program effectiveness. The Sport Management self study states that the curriculum of the program aligns with the guidelines developed by the North American Society for Sport Management (NASSM) in conjunction with the Commission on Sport Management Accreditation (COSMA). Again, give the alignment with the standards I suggest that the program follow through with program accreditation.

b. Executive Summary

Table 1. External Reviewer Observations - B.A. in Kinesiology

Program Review Element	Check the appropriate selection				Provide explanation if not agree with element and/or why unable to evaluate
	Agree	Not Agree	Unable to Evaluate	Not Applicable	
The program's self-study is a realistic and accurate appraisal of the program.	X				
The program's mission and its contributions are consistent with the institution's role and mission and its strategic goals.	X				

The program's goals are being met.	X				
The curriculum is appropriate to the breadth, depth, and level of the discipline.	X				
The curriculum is current, follows best practices, and/or adheres to the professional standards of the discipline.	X				
Student demand/enrollment is at an expected level in the context of the institution and program's role and mission.	X				
The program's teaching-learning environment fosters success of the program's students.	X				
Program faculty members are appropriately credentialed.	X				
Program faculty members actively contribute to scholarship, service and advising.	X				
Campus facilities meet the program's needs.	X				
Equipment meets the program's needs.	X				
Instructional technology meets the program's needs.		X			Additional online teaching support is needed
Current library resources meet the program's needs.		X			PubMed and more e-books are needed
Student learning outcomes are appropriate to the discipline, clearly stated, measurable, and assessed.		X			This is an on-going process and is not yet complete
Program faculty members are involved in on-going assessment efforts.	X				
Program faculty members analyze student learning outcome data and program effectiveness to foster continuous improvement.		X			As assessment procedures change, so will the way the department uses this data
The program's articulation of its strengths and challenges is accurate/appropriate and integral to its future planning.	X				

(from CMU Program Review Manual_ 2012)

September 7, 2012

Table 2. External Reviewer Observations – B.S. in Sports Management

Program Review Element	Check the appropriate selection				Provide explanation if not agree with element and/or why unable to evaluate
	Agree	Not Agree	Unable to Evaluate	Not Applicable	
The program's self-study is a realistic and accurate appraisal of the program.	X				
The program's mission and its contributions are consistent with the institution's role and mission and its	X				

strategic goals.					
The program's goals are being met.	X				
The curriculum is appropriate to the breadth, depth, and level of the discipline.	X				
The curriculum is current, follows best practices, and/or adheres to the professional standards of the discipline.	X				
Student demand/enrollment is at an expected level in the context of the institution and program's role and mission.	X				
The program's teaching-learning environment fosters success of the program's students.	X				
Program faculty members are appropriately credentialed.	X				
Program faculty members actively contribute to scholarship, service and advising.	X				
Campus facilities meet the program's needs.	X				
Equipment meets the program's needs.	X				
Instructional technology meets the program's needs.		X			Additional online teaching support is needed
Current library resources meet the program's needs.		X			Need more e-books and sport management specific journals
Student learning outcomes are appropriate to the discipline, clearly stated, measurable, and assessed.		X			This is an on-going process and is not yet complete
Program faculty members are involved in on-going assessment efforts.	X				
Program faculty members analyze student learning outcome data and program effectiveness to foster continuous improvement.		X			As assessment procedures change, so will the way the department uses this data
The program's articulation of its strengths and challenges is accurate/ appropriate and integral to its future planning.	X				

(from CMU Program Review Manual_ 2012)

September 7, 2012

c. Recommendations

Highest Priority Recommendations:

- As stated in my narrative, I feel very strongly that both the Kinesiology and Sport Management programs are in need of additional faculty and support for professional

development. Without additional faculty and resources I do not think the addition of graduate programs is advisable. The current undergraduate enrollment alone warrants additional human resources in order to maintain the high standards of quality already in place. Although it is not within CMU's policies I think that at least one professional advisor should be hired to help the faculty with the heavy student advisement load. Given the over abundance of committee service, some form of help in other areas are needed for the faculty to grow and the department to thrive well into the future. The faculty, particularly junior faculty, needs additional support for professional development and research presentation opportunities. The minimal investment pays off in more program exposure and national awareness of the quality of programs offered at CMU.

- The online programming offered by both Kinesiology and Sport Management needs additional support. Additional technical support for course development, particularly the ability to stream video, and student support should be a priority. Online education has been a consistently growing trend within higher education. The geographic location of CMU makes online education a strong option to boost enrollments and enhance the reach of programs.
- Resources available through the library could use some additional enhancement. The ability to use PubMed would be useful to the faculty and students as well as additional e-books and journals. Ultimately, I believe that resources can be available, but it is up to the entire faculty, not just a few, to better communicate with the librarians regarding needs.
- I feel that the department should seek Accreditation for more programs. In particular, Sport Management and Fitness and Health Promotion. As stated in the self-studies, the curriculum already aligns, so I think it is in the best interest of the department to move forward with formal accreditation.
- I recommend that the department work closely with the Office of Assessment to continue to refine SLO's and assessment procedures and data collection to document success. This is an ongoing process that the entire campus is currently working through.

Most Exemplary Element of the Program:

- For both the Kinesiology and Sport Management programs, the most exemplary element is the faculty's dedication to providing the students with a high quality curriculum and learning experiences both inside and outside of the classroom. The students receive practical experiences which help them grow and succeed as professionals. In fact, during my visit, Dr. Bell was preparing to take a group of Sport Management students to Denver to tour some professional sports facility. I saw evidence of a class project to attempt to get visitors of the Maverick Center to use the stairs instead of the elevator (I used the stairs!). I also witnessed a very hands-on practical lesson being taught to K-12 teaching majors. Everything that I saw and heard conveyed to me that the faculty is fully dedicated to the success of students and that they care about them and their futures.

Most Important Improvement during this Review Cycle:

- The CMU academic program review manual requests that these improvements be considered within the context of limited resource availability. My interpretation of this statement is that additional faculty lines and the online technical support are largely out of the departments hands. However, I do feel extremely passionate about both of these recommendations. Improvements within specific control of the department that they should focus on within this review cycle are the pursuit of additional programs accreditation, better communication with the librarians in order to procure additional resources, and to continue work with the Office of Assessment to develop assessment procedures and to refine SLO's to include higher order outcomes.

TO: Dr. Steve Werman, Assistant Vice President of Academic Affairs

FROM: Dr. Jill Cordova, Head, Department of Kinesiology

DATE: April 15, 2013

RE: Rejoinder for External Reviewer Program Review Report

We are in receipt of our external review report from Dr. James Hannon. We would like to thank Dr. Hannon for his visit and his written review of our programs. The following are some clarifications concerning some of Dr. Hannon's comments:

1. Online Course Offerings: Kinesiology faculty representing the programs reviewed had the opportunity to meet with Dr. Hannon during his visit. During this time we discussed our online course offerings. Faculty mentioned that online chat was available in all of our online courses within D2L. Additionally, some of the faculty currently use both SKYPE and streaming videos in their online courses. We welcome the addition of any online support that may become available.
2. Accreditation: Currently our K12 Education program is accredited by the National Association for Sport and Physical Education (NASPE) and we are interested in following up with the possibility of other accreditations.
3. Faculty Support and Resources: As Dr. Hannon stated we as a department feel the need for more faculty to help cover our teaching, advising, service, and professional development responsibilities. Although the University does not have mandatory advising requirements for the students, many of our faculty reach out to their advisees each semester and encourage them to come on in for a visit.
4. Library Resources: The library does in fact have PubMed available. The library has also recently asked us to review the journals they have for our fields of study and have offered us the opportunity to add to this list.
5. SLO Development and Assessment Plans: The Kinesiology faculty is committed to the planning and implementation of the program's student learning outcomes and assessment plans.
6. Scholarship Criteria: The Department of Kinesiology does have specific criteria written for evaluation purposes in scholarship, advising, service, and teaching. It is planned that next year we will revisit this criteria and make sure that it is current, accurate, and relevant to our entire faculty.