

Department of Exercise and Sports Science
Self-Study

AY 2012 - 2013

SECTION 1: OVERVIEW

This section provides the reader with a brief history of our Department, our mission and goals, how these goals fit in with the mission of the University, and how we integrate with the University's strategic plan.

The last formal self-study process was conducted in 2004. This program review was begun in 2012 by Jeff Godin, Chairperson of the Exercise and Sport Science Department. Faculty members contributed to this review during the fall and spring semesters; each were assigned sections to research, write, present to the departmental faculty, and then edit incorporating the suggestions made.

History of the Department

Early Years

Physical Education was a part of the curriculum at Fitchburg State College for a long time. Prior to 1969, a selection of team and individual exercise, sport, and dance activities were offered to fulfill the College's two-year physical activity requirement. In 1969, this requirement was revised to the three-credit requirement in health and fitness education that is offered today. That change reflected not only the department's commitment to the link between health and physical activity, but also its leadership in New England at the collegiate level regarding the development and inclusion of a three-credit health and fitness requirement as part of the Liberal Arts and Sciences curriculum.

While servicing this requirement, in 1988, the department initiated discussions with the Biology department to offer a collaborative major in Biology/Exercise Science, which was formalized by the All College Committee during that year. Students in this major took the majority of courses in the Biology department, with a concentration of three courses in Exercise Science, and an Exercise Science internship. Based on the current trends in the fields of Exercise Science and health/fitness, and based on the collaborative model established with the biology department, in 1997, the All College Committee formally approved a second collaborative major in Business Administration/Fitness Management. In this major, students took the majority of their courses in the Business Administration department, with a concentration of seven 1 - 3 credit Exercise Science courses and three courses in Biology. Additionally, a Dance minor was approved in 1997. Hence, the Physical Education department served as a comprehensive service department offering courses in the Liberal Arts and Sciences curriculum, a minor in Dance, and collaborative professional programs in conjunction with the Biology and Business Administration departments. This fulfilled the departmental mission of "fostering healthy and physically active student lifestyles, and to prepare, professionally, students in program concentrations in their major areas of study."

Review Recommendations

In the spring semester of 1999, the Physical Education department completed an internal review. An expert in the field of Exercise Science and Fitness Management conducted a site visit based on the review. Pertinent recommendations and comments from this external review were:

- change the name of the department to reflect its curriculum and philosophy

- develop a major that has opportunity to attract students specifically interested in Exercise Science or Fitness Management
- introduce additional departmental course work to support the major
- recruit replacement faculty (from retirements) to fulfill the department's mission

Name Change

Following these recommendations, in the spring of 2000, the departmental name was changed from Physical Education to Exercise and Sport Science. *Physical Education* is widely interpreted by most higher education institutions and potential students as a teacher preparation program. There are both state and private institutions in Massachusetts that have teacher preparation programs in Physical Education. We do not conduct (and have not conducted) a teacher education program, nor are we planning to do so in the foreseeable future.

New Faculty

A full-time faculty replacement and a full-time faculty member with half-time responsibilities in the Fitness Center were hired; both had expertise to fulfill the departmental mission. Additionally, in 2000 the department moved to a new recreation complex that included departmental and athletic offices, an exercise science laboratory, technology-ready classrooms, a fitness center, pool, walking/jogging track, dance studio, racquetball courts, athletic training space, and a large gymnasium.

Exercise and Sport Science may be described best as the study of the responses to and the consequences of physical activity. Exercise science is related to the sub-disciplines of physiology, neuro-motor control and motor learning, and biomechanics. Sport science is related to the disciplines of philosophy, psychology, sociology, and history, and would include management studies. Both exercise science and sport science have a discipline (scientific) and professional (applied) component. These fields of study concentrate on the effect of physical activity and sport on health and fitness for society as a whole, and for FSC's students in particular. Therefore, the umbrella term, Exercise and Sport Science, was in anticipation of a proposed major in Exercise and Sport Science. The department continues to teach the health-fitness liberal arts requirement and to support a course in the Leadership Academy Honors Program. The name change more accurately reflected the department's mission.

Based upon the College Mission Statement (1999), the Math/Science Task Force initial discussions (1999), the departmental review (1999), the College's updated strategic plan (2000), enrollment success in the two collaborative majors, the new facility, and Academic Affairs Division encouragement, it was proposed that a major for the department be instituted.

A major in Exercise and Sport Science, provides the opportunity for two specific career tracks - Clinical Exercise Physiology and Fitness Management - were developed and approved by the (than) Physical Education department in January, 2000, by the Biology

department in February 2000, by the Business Administration Department in April 2000. With the hiring of two new faculty in the summer of 2000, revisions to the curriculum were made and discussed with the above groups and approved. The All College Committee approved the curriculum on May 10, 2001. An external review was also completed in May, and recommended revisions be made. The Board of Trustees approved the major at its meeting in June. The Board of Higher Education of the Commonwealth of Massachusetts approved the major in February, 2002.

After 10 years, the major has approximately 230 students as of spring 2012. During the past 10 years, the curriculum has undergone a number of changes to better serve student needs. The number of faculty has fluctuated due to people retiring or leaving for another position. When the last review was conducted in 2004 we had 4 full time tenured faculty. Starting in the fall of 2012, there will be 8 full time tenured faculty.

Vision of the Exercise and Sport Science Department

Note: In spring 2008, the working draft vision statement for the Exercise and Sport Science Department was developed. There are some changes from the mission statement stated in the 2004 Department review.

The Exercise and Sport Science department's vision is to offer a high-quality, student-centered, academically rigorous education that develops graduates who are leaders in the profession, to continue to offer quality courses fulfilling the Liberal Arts and Sciences requirement and to provide various health/fitness/wellness services to the Fitchburg State University community.

We will be set apart by:

1. The relevance of our programs and course offerings with regard to professional trends
2. The atmosphere of student-centeredness
3. The reputation of producing graduates who are leaders in the profession.

Goals of the Exercise and Sport Science Department

- To provide relevant professional education supported by a rigorous scientific base to students who choose Exercise and Sport Science careers, either in the clinical or the fitness setting
- To provide leadership opportunities through apprenticeships, specified internships, and presentations and publications
- To provide career alternatives to students in other majors by offering courses related to their chosen fields of endeavor
- To support the college's liberal arts requirement in the area of health and fitness
- To provide opportunity for students to learn lifetime leisure skills

Relationship of the College's Mission to the Exercise and Sport Science Department

The mission of the College emphasizes excellence in teaching and learning, by blending both

arts and science with professional programs. The College also fosters lifelong learning and civic and global responsibility, both in and beyond the College community.

The Exercise and Sport Science Department's curriculum is very heavily science based. The curriculum provides the foundation for the students to be prepared for careers in the fitness industry or preparation to attend graduate school. To facilitate learning, many of the courses have a formal lab scheduled or lab activities included so students can relate classroom activities to real life experiences, that will occur in the field.

To demonstrate excellence in teaching, many of the courses are taught using the subject matter required for certification by the American College of Sports Medicine, National Strength and Conditioning and other similar professional organizations. Faculty pedagogy consist of lecture, demonstration, lab and the latest technology.

Lifelong learning experiences required for Exercise and Sport Science students to graduate are attending professional conferences and a 240 hour internship. Both of these professional experiences provide the students with an understanding of how important lifelong learning is to maintaining excellence in their chosen profession. Throughout the school year, students have many opportunities to attend campus wide lectures, demonstrations and movies on a variety of related topics.

Considering civic responsibility, Exercise and Sport Science students participate annually in two activities. One is the Falcon 5k road race, where the money from the race is donated to a worthy cause in the community. The second is the annual health fair. Students conduct different body composition measurements, provide an explanation what the results means and make suggestions to the person how to improve their health.

Program Structure Including Concentrations and Minors

The Exercise and Sport Science major has two concentrations: Fitness Management and Clinical Exercise Physiology. Besides the major courses, students have to complete the Liberal Arts and Sciences clusters equaling 36 credits.

Fitness Management (123 or 125 credits depending on SMT electives) is a combination of science based courses and Business Administration courses. A student almost completes a minor in Business Administration. A major component of the curriculum, is senior year the student completes a 240 hour internship (See appendix for the 4 year plan and section on Curriculum).

Clinical Exercise Physiology (122credits) focuses heavily on the sciences in order to prepare students for graduate school in such majors as physical therapy, cardiac rehab, etc. Senior year students must complete a 240 hour internship to graduate (See appendix for the 4 year plan and section on Curriculum).

Interdisciplinary Programs

The Exercise and Sport Science Department provides a faculty member to teach the Health and Fitness requirement for the University's Leadership Academy. In the fall of 2011, the course was changed from Leadership in the Outdoors for 1 credit to a 3 credit course titled: Experiential Approaches to Wellness. The Leadership Academy was also renamed to the Honors Program.

The Leadership Academy courses were developed to satisfy the University wide requirement for Health and Fitness. Both courses included an outdoor component (orienteering), confidence course and leadership development. The Experiential Approaches to Wellness course incorporates more health related topics than the Leadership in the Outdoors course did. Thus, the reason for the course being worth 3 credits.

Significant Changes During the Past 5 Years

A campus wide significant change was the college had a name change. In fall 2011, Fitchburg State College was renamed Fitchburg State University.

Since the last review in 2004, the Exercise and Sport Science has participated in a number of initiatives and undergone a number of changes. The Department has gone through governance to change the majors curriculum so it would be more beneficial to the student. This means more specific courses for the Clinical Exercise Physiology concentration so students would have the pre-requisites for graduate school. Also, changing the Fitness Management curriculum so students would have a minor in Business Administration.

A major recommendation by the previous reviewer, was to increase the number of full time tenured faculty. Due to the increase in the number of majors, we have hired additional full time, tenured track faculty since the last review. Since the last review we have also had a number of faculty who have either left or retired. In 2004, there were 4 full-time tenure track faculty and for the fall 2012 there will be 8 full time tenured track faculty. To support the Health and Fitness course and some of the specialized courses in the Exercise and Sport Science major, a number of part-time and full time temporary faculty will also be hired. The Department secretary has gone from a part time to a full time position.

In the previous review it was recommended that we pursue accreditation. Initiatives we are working towards are accreditation and an outcomes assessment process for the Department (see the section on Curriculum).

During the past 5 years, Exercise and Sport Science students have two new opportunities available to them. Students may join the Exercise Science Club and students can present their research at the University's Undergraduate Conference held in the spring semester.

The Exercise and Sports Science Department

Faculty Data as of Spring 2012

Present Full-Time Faculty

- David Antaya, Ed. D., Professor
- Jeffrey Godin, Ph.D., Departmental Chair, and Associate Professor
- Timothy Hilliard, Ph.D., Associate Professor
- Monica Maldari, M.S., Instructor*
- David Rice, Ph.D., Assistant Professor
- Jason Talanian, Ph.D., Assistant Professor
- Michael Ward, M.S., Instructor
- Danielle Wigmore, Ph.D., Assistant Professor

Tenured Faculty

- David Antaya, Ed. D.
- Jeffrey Godin, Ph.D.
- Timothy Hilliard, Ph.D.
- Danielle Wigmore, Ph.D.

Tenure-Track Faculty

- David Rice, Ph.D., Assistant Professor
- Jason Talanian, Ph.D., Assistant Professor

Temporary, Full-Time Faculty

- Monica Maldari, M.S.*
- Michael Ward, M.S.

Adjunct Faculty

- Novelette Demercado, M.S.
- David Heikkinen, M.S.*
- Indira Thimmiah, DGO (doctoral degree awarded in India)

* **Hired as a tenure-track, assistant professor in the department, as of fall 2012**

Faculty Qualifications and Diversity

The Exercise and Sports Science Department currently has six full-time faculty members, with an additional two full-time faculty members hired to start in the fall of 2012. There is currently one full professor, two associate professors, and three assistant professors (both of the faculty members hired to start in the fall of 2012 will be starting at the assistant professor level). All current faculty members possess terminal degrees in fields related to Exercise Science. The varied Exercise Science specializations of the faculty members provide support for the two different concentrations offered within the department, Clinical Exercise Physiology and Fitness Management.

Faculty University, Professional, and Community Activities

In addition to their teaching duties, faculty members of the Exercise and Sports Science Department conduct research and present at professional conferences. Faculty members also serve on departmental and university committees, participate in the academic functions of the university, and are involved in community service work.

The Exercise and Sports Science Department faculty have a variety of professional skills, with many having certifications from the American College of Sports Medicine and the National Strength and Conditioning Association, among others. The faculty members have presented their work at regional, national, and international conferences. This work has included research on the effects of caffeine ingestion, skeletal muscle fatigue, and how energy intake affects athletic performance. Many of the faculty members are active coaches and participants in athletic events, thus giving them unique insight into the effectiveness of the latest sports-related scientific trends.

Faculty Curricula Vitae

(See Appendix)

Faculty Academic Preparatory Backgrounds

David Antaya

- Ed.D., Leadership in Schooling, University of Massachusetts, Lowell
- M.A., Outdoor Education, University of Northern Colorado
- B.A., Physical Education, University of Massachusetts, Amherst
- Certifications:
 - o CPR Professional Rescuer and First Aid Retraining
 - o Standard First Aid /CPR/AED
 - o American Red Cross Lifeguarding Instructor Trainer
 - o Certified Pool Operators Certificate
 - o American Red Cross Lifeguard Retraining
 - o SOLO Wilderness First Aid

Jeffrey Godin

- Ph.D., Kinesiology, University of Connecticut
- M.S., Physical Education, Bridgewater State College, Bridgewater, MA
- B.S., Physical Education, Bridgewater State College, Bridgewater, MA
- Certifications:
 - o American College of Sports Medicine: Certified Health Fitness Director
 - o American College of Sports Medicine: Certified Health Fitness Instructor
 - o National Strength and Conditioning Association: Certified Strength and Conditioning Specialist
 - o NSCA Fly Solo Mentor
 - o American Heart Association: CPR/AED/First Aid
 - o American Safety and Health Institute: CPR/First Aid Instructor
 - o American Council on Exercise: Certified Personal Trainer
 - o International Society for Sport Nutrition: Certified Sport Nutritionist
 - o Certified Cycling Coach, USA cycling
 - o Certified USA Triathlon Coach

Timothy Hilliard

- Ph.D., Exercise Science, University of Massachusetts, Amherst
- B.A., Public Affairs/Journalism, Keene State College, Keene, NH
- Certifications:
 - o National Strength and Conditioning Association: Certified Strength and Conditioning Specialist

Monica Maldari

- M.S., Clinical Exercise Physiology, University of Wisconsin, La Crosse, WI
- B.S., Exercise Science, University of Massachusetts, Amherst
- Certifications:
 - o American College of Sports Medicine: Exercise is Medicine (EIM) Level 3 Provider
 - o American College of Sports Medicine: Registered Clinical Exercise Physiologist
 - o American College of Sports Medicine: Certified Exercise Specialist
 - o American Heart Association: Basic Cardiac Life Support (BCLS)

David Rice

- Ph.D., Exercise Physiology, University of Pittsburgh, Pittsburgh, PA
- M.S., Exercise Science, University of Massachusetts, Amherst
- B.S., Exercise Science, University of Massachusetts, Amherst

Jason Talanian

- Ph.D., Human Physiology, University of Guelph, Ontario, Canada
- M.Sc., Exercise Physiology, California State University, Sacramento
- B.A., Biological Science, California State University, Sacramento
- Certifications:
 - o American College of Sports Medicine: Certified Personal Trainer
 - o National Strength and Conditioning Association: Certified Strength and Conditioning Specialist

Michael Ward

- M.S., Physical Education, Bridgewater State College, Bridgewater, MA
- B.S., Psychology, University of Massachusetts, Dartmouth
- Certifications:
 - o National Strength and Conditioning Association: Certified Strength and Conditioning Specialist
 - o International Society of Sports Nutrition: Certified Sports Nutritionist
 - o USA Weightlifting: Certified Club Coach (USAW)
 - o USA Weightlifting: New England LWC certified referee

Danielle Wigmore

- Ph.D., Exercise Science, University of Massachusetts, Amherst
- M.S., Exercise Science, University of Massachusetts, Amherst
- B.S., Physical Education, Skidmore College, Saratoga Springs, NY

Faculty Professional Experiences

David Antaya

- Chair, Exercise and Sports Science Department, Fitchburg State University, 2000-2006
- Professor of Exercise and Sports Science, Fitchburg State University, 1981-present
- LEAD Instructor, Mountain Lynx, Ashburnham, MA, 1998-2000
- Camp Director, YMCA Civic Center, Newburyport, MA, Summers, 1981-present
- Outdoor Education Instructor, Intramural Director and Equipment Manager, Northern Essex Community College, 1974-1980
- Physical Director/Outdoor Trip Leader, YMCA Civic Center, Newburyport, MA, 1973-1977

Jeffrey Godin

- Chair, Exercise and Sports Science Department, Fitchburg State University, 2008-present
- Associate Professor of Exercise and Sports Science, Fitchburg State University, 2000-present
- Fitness Director, Recreation Services, Fitchburg State University, 2000 - 2004
- Strength and Conditioning Coach, Recreation Services, Fitchburg State University, 2000 - 2004
- Strength and Conditioning Coach, Franklin High School Ice Hockey, Franklin, MA, 1999-2000

Timothy Hilliard

- Associate Professor of Exercise and Sports Science, Fitchburg State University, 2005-present
- Assistant Professor, Department of Physical Therapy, Northeastern University 1996 - 2004
- Lecturer, Department of Exercise & Sport Sciences, University of Arizona, 1994 - 1996

Monica Maldari

- Instructor, Department of Exercise and Sports Science, Fitchburg State University, 2008-present
- Clinical Exercise Physiologist, Emerson Hospital, Concord, MA, 2001-present
- Clinical Exercise Physiologist, Brigham and Women's Hospital, Boston, MA, 1997-2000
- Consultant, Cardio Response, Natick, MA, 1997

- Graduate Assistant in Adult Fitness/Cardiac Rehabilitation Program, La Crosse, WI, 1996-1997

David Rice

- Assistant Professor of Exercise and Sports Science, Fitchburg State University, 2011-present
- Instructor, Department of Exercise Science, University of Massachusetts/Amherst, 2004-2005
- Instructor, Department of Exercise Science, Holyoke Community College, 2001-2004

Jason Talanian

- Assistant Professor of Exercise and Sports Science, Fitchburg State University, 2011-present
- Assistant Professor, Department of Exercise and Science, Bacone College, 2009-2011
- Territory Manager Associate, Applied Medical Corporation, 2008-2009
- Doping Control Officer, Canadian Centre for Ethics in Sports, 2007-2008
- Exercise Physiologist, Medtox Corporation, 2003
- Employment Exercise Technician, Schools Insurance Authority, 2002-2003

Michael Ward

- Instructor, Department of Exercise and Sports Science, Fitchburg State University, 2008-present
- Instructor, Bridgewater State University, Department of Movement Arts Health Promotion and Leisure Studies, 2008-2009
- Strength and Conditioning Coach, Bridgewater State University, Department of Movement Arts Health Promotion and Leisure Studies, 2005-2007
- Strength and Conditioning Intern Coach, College of the Holy Cross, Department of Athletics, Worcester, MA, 2007
- Personal Trainer, College of the Holy Cross, Department of Athletics, Worcester, MA, 2008
- Personal Trainer, Worcester Fitness/St. Vincent Hospital, Worcester, MA, 2006-present

Danielle Wigmore

- Associate Professor of Exercise and Sports Science, Fitchburg State University, 2006-present

- Instructor, Department of Exercise Science, University of Massachusetts, Amherst, summer 2003 and summer 2005
- Graduate Teaching Assistant, Department of Exercise Science, University of Massachusetts, Amherst, 2001-2003
- Teaching Assistant, Skidmore College, 1995-1998
- Research Assistant, University of Massachusetts, Amherst, 2000-2006
- Fitness Consultant, University of Massachusetts Police Department, Amherst, MA, 2001
- Exercise Physiologist and Group Fitness Director, Fitcorp, Waltham, MA, Billerica, MA, 1999-2000
- Personal Trainer, World Gym, Saratoga Springs, NY, 1998
- Fitness evaluator/aerobics instructor, Skidmore Employee Lifetime Fitness Program, Skidmore College, 1996-1997

University Activities

David Antaya

- Geo Club Advisor, 1984-2003
- Curriculum Committee, 1997-1999
- Class Advisor, 1997
- Faculty Development Committee, 1992-1993
- Adventure Travel and Environmental Series Committee, 1988-1993
- Sophomore Nurses Program, 1992
- Program Committee, 1991-1992
- Union Crisis Committee, 1990-1992
- Nurses Awareness Program, 1991
- Karate Club, 1990
- Campus Center Advisory Board, 1985-1989
- Trip Co-Leader, Geo Club, 1988
- Director, Career Services Selection Committee, 1987-1988
- Student Government Advisor, 1987-1988
- ACC Curriculum Committee, 1998-2002
- Recreation Center Grand Opening Planning Committee, 2000
- All College Committee, 2005-2007
- Liberal Arts and Science Council to Review the LA&S Requirements, 2004-present
- Tenure Committee for Dr. Jeffrey Godin, 2007
- Exercise and Sports Science Curriculum Committee, 2000-present
- FSU Hiring Committees, 2000-present

Jeffrey Godin

- University Technology Advisory Committee, 2002-2004
- University Athletic Hall of Fame, 2001-2006
- Student Affairs Professional Development Committee, 2001-2003
- University Academic Policies Committee, 2001-2002
- Human Subjects Committee, 2004 – 2006, 2008-2009
- Curriculum Committee, 2005 – 2009
- Student Affairs, Professional Development Committee, 2001 – 2004
- NEASC Self Study, CO-Chair Standards 1-3, 2010-2011

Timothy Hilliard

- EXSS Academic Standing Committee, 2007-present
- EXSS Search Committee, 2005-2007; 2008; 2010-present
- Human Subjects Committee, 2005-2007
- Technology Advisory Committee, 2009-present

Monica Maldari

- Health & Wellness Committee, 2011-present

David Rice

- All College Committee, Curriculum subcommittee, 2011-present
- Human Subjects Committee, 2011-present
- EXSS Search Committee, 2011-2012
- EXSS Academic Standing Appeals Committee, 2011-present

Jason Talanian

- Chair, Human Subjects Committee, 2011-present
- EXSS Search Committee, 2011-2012

Danielle Wigmore

- All College Committee, Curriculum subcommittee, 2009-2011
- Leadership Academy Curriculum Committee, 2010-2011
- Member, Human Subjects Committee, 2006-2007
- Chair, Human Subjects Committee, 2009-2010
- EXSS Academic Standing Appeals Committee, 2010-present
- EXSS Search Committee, 2007-2008, 2010-2011, 2011-2012 (Committee Chair)
- Secretary, Student Affairs Committee, 2007-2008

- Ruth Butler Grant Committee, 2011-present

Faculty Professional Memberships

David Antaya

- Appalachian Mountain Club
- Association for Experiential Education
- American and Massachusetts Alliances for Health, Physical Education, Recreation, and Dance
- New England Chapter of the American College of Sports Medicine

Jeffrey Godin

- American College of Sports Medicine
- New England Chapter of the American College of Sports Medicine
- National Strength and Conditioning Association
- International Society for Sport Nutrition
- International Dance and Exercise Association for Health and Fitness Professionals
- American Medical Athletic Association
- USA Cycling
- USA Triathlon

Timothy Hilliard

- American College of Sports Medicine
- Massachusetts State Track Coaches Association
- National Strength & Conditioning Association
- North American Society for Psychology of Sport and Physical Activity
- USA Cycling
- USA Track & Field Association

Monica Maldari

- Massachusetts Association of Clinical Exercise Physiologists, Founding Member
- American College of Sports Medicine
- New England American College of Sports Medicine
- Clinical Exercise Physiology Association
- Massachusetts Association of Cardiovascular and Pulmonary Rehabilitation

David Rice

- American College of Sports Medicine
- New England Chapter of the American College of Sports Medicine

Jason Talanian

- American College of Sports Medicine
- New England Chapter of the American College of Sports Medicine
- American Physiological Society

Michael Ward

- National Strength and Conditioning Association
- International Society for Sport Nutrition
- USA Weightlifting

Danielle Wigmore

- American College of Sports Medicine
- New England Chapter of the American College of Sports Medicine
- American Physiological Society

Faculty Professional Activities, Presentations, and Publications

David Antaya

PRESENTATIONS

November 2006	NAWWG Consortium Orienteering Workshop for Physical Education Teachers
April 2005	“Collaboration Experimentation to Unmasking Your Inner Leader” Fitchburg State College 8 th Annual Leadership Conference
April 2005	Tech Prep Leadership Workshop Fitchburg State College

October 2004	<p>“Corporate, College Consortium and Kids Combine Team Building and Leadership”</p> <p>Tech Prep National Conference</p> <p>Minneapolis, Minnesota</p>
February 2004	<p>“Leadership Workshop for Middle School”</p> <p>Fitchburg Public Schools</p> <p>Fitchburg State College</p>
November 2003	<p>“Merging Leadership, Assessment, and Career Planning”</p> <p>Massachusetts Tech Conference</p> <p>Fitchburg State College</p>
October 2003	<p>“Merging Leadership, Assessment, and Career Planning”</p> <p>Tech Prep National Conference</p> <p>Nashville, Tennessee</p>
March 2003	<p>“Orienteering”</p> <p>MAHPERD</p> <p>Worcester, Massachusetts</p>
October 2002	<p>“Experiential Interdisciplinary Leadership”</p> <p>National Tech Prep Conference</p> <p>Cincinnati, Ohio</p>

May 2002	<p>“Experience Interdisciplinary Leadership”</p> <p>Title I Conference</p> <p>Hyannis, Massachusetts</p>
March 2002	<p>“Interdisciplinary Experiential Leadership”</p> <p>Earth Connection</p> <p>UMASS, Amherst</p>
March 2002	<p>“Orienteering Thru Leadership”</p> <p>MAHPERD State Convention</p> <p>Worcester, Massachusetts</p>
July 2000	<p>Diversity in Leadership Conference</p> <p>Fitchburg State College</p> <p>Initiative Activities / Ropes Course</p>

Jeffrey Godin

PRESENTATIONS

New England Triathlon Symposium. Metabolic Efficiency. A one hour seminar presented to 50 multisport athletes and coaches. January, 2012

New England Triathlon Symposium. Complex training for the endurance athlete. A one hour workshop presented to 50 multisport athletes and coaches. January, 2012

New England Regional Chapter of the National Strength and Conditioning Association. A needs Analysis for Mud and Obstacle Racers. Presented to 40 Strength and Conditioning professionals. October, 2011.

New England Triathlon Symposium. Nutrition Science: Applications for athletes. A one hour seminar presented to 50 multisport athletes and coaches. January, 2011

New England Triathlon Symposium. Race Time: tapering for peak performance. A one hour workshop presented to 50 multisport athletes and coaches. January, 2011

New England Health and Racquet Club Association Regional Conference. Perspective in the ultraendurance athlete: implications for diet and training. A one hour seminar presented to 25 fitness professionals. May, 2010.

New England Multisport Expo. Fuel Up! A three hour workshop delivered to 25 endurance athletes. March, 2010.

New England Triathlon Symposium. Exercise Physiology 101: Energy systems and performance. A one hour seminar presented to 50 multisport athletes and coaches. January, 2010

New England Triathlon Symposium. Application of periodization principles in endurance athletes. A one hour workshop presented to 50 multisport athletes and coaches. January, 2010

New England Multisport Expo. Fluid and electrolyte needs during training and racing. A one hour presentation delivered to 100 endurance athletes. March, 2009.

New England Triathlon Symposium. Physiology of endurance training . A one hour seminar presented to 50 multisport athletes and coaches. February, 2009

New England Triathlon Symposium. Strength training for endurance athletes. A one hour workshop presented to 50 multisport athletes and coaches. February, 2009.

NIRSA Region1 presentation, Weight Loss supplements, A 1.5 seminar presented to recreation and fitness professionals. September 2008.

Seminar Presented over the internet (WEBINAR), New Wave Strength Training, A two hour presentation delivered to 30 strength and conditioning professionals. August, 2008.

New England Multisport Expo, Heart Rate Training and the Multisport Athlete. A one hour presentation delivered to 100 endurance athletes. March, 2008.

Seminar Presented over the internet (WEBINAR), Golf and tennis training, A two hour presentation delivered to 30 strength and conditioning professionals. August, 2007.

Seminar Presented over the Internet (WEBINAR), Last Chance Seminar: Peaking for endurance sports, a one hour presentation delivered to 25 athletes preparing for Lake Placid Ironman. July, 2007.

New England Multisport Expo, Dietary Supplementation and the multisport athlete. A one hour presentation delivered to 100 endurance athletes. March, 2007.

American Council on Exercise, Certified Personal Trainer 2 day workshop - Boston, MA July 2006, Sixteen hour workshop presented to attendees preparing for ACE-CPT exam.

National Strength and Conditioning Association, Certified Strength and Conditioning Coach 2 day symposium and workshop, Boston MA, July 2006. Sixteen hour workshop presented to attendees preparing for CSCS exam.

American Council on Exercise, Certified Personal Trainer 2 day workshop - Boston, MA April 2006, Sixteen hour workshop presented to attendees preparing for ACE-CPT exam.

National Strength and Conditioning Association, Certified Strength and Conditioning Coach 2 day symposium and workshop, Boston MA, March 2006. Sixteen hour workshop presented to attendees preparing for CSCS exam.

American Council on Exercise, Certified Personal Trainer 2 day workshop - Boston, MA January 2006, Sixteen hour workshop presented to attendees preparing for ACE-CPT exam.

American Council on Exercise, Certified Personal Trainer 2 day workshop - Boston, MA April 2005, Sixteen hour workshop presented to attendees preparing for ACE-CPT exam.

Exercise Etc. Fitness Conference, Houston, TX March 2005, presented five 2 hour workshops titled: "Plyometrics", "Assisted Stretching", "Exercise and the Shoulder", "Advanced Training with Resistance Tubing" and "Medicine Ball Training".

Exercise Etc. Fitness Conference, Los Angeles, CA, February 2005, presented five - 2 hour workshops titled: "Core Training", "Physiology of Strength Training", "Strength and Conditioning for Golf and Tennis", "Assisted Stretching" and "Strength and Conditioning for Skiing".

National Strength and Conditioning Association, Certified Strength and Conditioning Coach 2 day symposium and workshop, Boston MA, January 2005. Sixteen hour workshop presented to attendees preparing for CSCS exam.

American Council on Exercise, Certified Personal Trainer 2 day workshop, Boston, MA January 2005, Sixteen hour workshop presented to attendees preparing for ACE-CPT exam.

Exercise Etc. Fitness Conference, Boston MA, November 2005, Presented four - 2 hour workshops titled: "Core Training", "Plyometrics", "Exercise and the Shoulder", and "Medicine Ball Training".

Exercise Etc. Fitness Conference, Baltimore MD, September 2005, Presented four - 2 hour workshops titled: "Core Training", "Exercise and the Knee", "Exercise and the Shoulder", and "Medicine Ball Training".

National Strength and Conditioning Association, Certified Strength and Conditioning Coach 2 day symposium and workshop, Alexandria VA, September 2004. Sixteen hour workshop presented to attendees preparing for CSCS exam.

National Strength and Conditioning Association, Certified Strength and Conditioning Coach 2 day symposium and workshop, Boston MA, July 2004. Sixteen hour workshop presented to attendees preparing for CSCS exam.

MAPHERD Regional Conference, Worcester MA, March 2004. Total Sports Conditioning: Conducting group exercise for athletes. Presented to Physical Education Professionals. Co-presented by student – Jeffrey Jones.

NIRSA Region I Workshop Presentation. Providing community service through safe and effective strength programs for older adults. Waterville Valley, NH. December, 2002.

New England Chapter of the American College of Sports Medicine regional Conference. Is open or closed kinetic chain resistance training better for improving physical performance in older adults? Providence, RI, November 2002.

School Department, Milford, Connecticut. Inservice Workshop: "Operating a Fitness Facility in Public Schools", presented to physical educators, November 1999.

University of Connecticut, School of Education. "Physical Activity and Health", presented to graduate students in Education, June 1999.

Connecticut's Alliance for Health, Physical Education, Recreation, and Dance. Regional Conference, "Connecticut's Physical Fitness Assessment Program: Pilot Project", November 1998.

Naugatuck, Southbury, & Ledyard, Connecticut. "Connecticut's New Physical Fitness Assessment Protocol" workshop presented to Connecticut physical educators throughout the state, July 1998.

ACSM Health Fitness Instructor Workshop, University of Connecticut. “Applied Anatomy and Kinesiology”, June 1998.

ACSM Health Fitness Instructor Workshop, University of Connecticut, Laboratory Instructor, “Submaximal Bike Test Administration”, 1996 – 1997. Connecticut’s Alliance for Health, Physical Education, Recreation, and Dance. Regional Conference, “Connecticut’s Physical Fitness Assessment Program Opinion Survey”, November 1997.

School Department, West Hartford, Connecticut. Inservice Presentation: “Physiologic Differences Between Children and Adults” & “Physical Activity for Children and Youth”, presented to physical educators, September 1997.

New England Regional Chapter of the American College of Sports Medicine Annual Conference, Free Communication presentation, “Connecticut’s Physical Fitness Assessment Program Opinion Survey”, October 1997.

School Department, Hamden, Connecticut. “Youth Resistance Training” & “Youth Fitness Assessment”, presented to physical educators, August 1997.

State Department of Corrections, Cheshire, Connecticut. “Applied Anatomy and Kinesiology”, “Progressive Resistance Training”, & “Programming for Special Populations”, presented to Dept. of Corrections Fitness Instructors, July 1997.

School Department, Newington, Connecticut. Inservice Presentation. “Physical Fitness Assessment in Connecticut: Six Year Review” & “Physical Fitness Assessment Pilot Project”, presented to physical educators, December 1996.

PUBLICATIONS

Godin, J. T. (2002). Effect of open- and closed kinetic chain resistance training on physical performance in older adults. Dissertation, University of Connecticut.

Chatterton, C. T., Camaione, D. N., Godin, J. T. (2001). Determinants of moderate-intensity physical activity in a work-site population. Abstract submitted to American College of Sports Medicine, National Conference, May.

Schlicht J.S., Godin J.T., & Camaione D.N.. (1999). How to Help your Clients Stick with an Exercise

Program: Building Self-efficacy to Promote Exercise Adherence. ACSM’s Health & Fitness Journal, 3, #6, 27 - 31.

Camaione D.N., Godin J.T., Schlicht, J.S., & Chatterton C.T. (1997). Connecticut’s New Fitness Test Process.

CAHPERD The Bulletin, 43, 9 – 10.

Camaione D.N., Godin J.T., Schlicht, J.S., & Chatterton C.T. (1997). Connecticut’s Physical Fitness Assessment Program.

CAHPERD The Bulletin, 43, 11 - 13.

Godin J.T., Camaione D.N., & Chatterton C.T. (1997). Joints in Motion Marathon Training Manual, Southern New England Chapter of the Arthritis Foundation.

Timothy Hilliard

PRESENTATIONS

Presentations at International Conventions

A Pilot Study: Development Of A Model To Predict Localized Muscle Fatigue

During Hand-Intensive Work. Presented at *International Society of*

Biomechanics and Sport International Convention, Amherst, MA, July 1993

Presentations at National Conventions

Craniovertebral Angle Following Backpack Loading. Presented at *American Physical Therapy Association* Combined Sections Meeting, Boston, MA, February, 2002

Improved Motor Function And Muscle Activation Following Constraint-Induced Movement Therapy. Presented at *The American College of Sports Medicine* National Convention, Baltimore, MD, May 2001

Age & Gender Differences in Lower Extremity Control Descending Stairs.

Presented at *American Alliance of Health, Physical Education,*

Recreation & Dance National Convention, Cincinnati, OH, March, 2001

Intrarater Reliability Of A Hand Held Device Used To Measure Head Posture and Cervical Curvature. Presented at *The American College of Sports Medicine* National Convention, Indianapolis, IN, May 2000

Gender and Age Effects in Rapid Movement Control. Presented at *American*

College of Sports Medicine National Convention, Cincinnati, OH, May

1996

Characteristics Of Young And Elderly Females During Rapid Limb

Movement. Presented at *American College of Sports Medicine* National

Convention, Cincinnati, OH, May 1996

Retention of Rapid Movement Kinematic and Electromyographic Practice

Improvements in Young and Elderly Women. Presented at *American*

Alliance of Health, Physical Education, Recreation & Dance National

Convention, Atlanta, GA, March, 1996

EMG Power Spectrum Analysis During Fatiguing Maximal Isometric Wrist

Flexion Contractions. Presented at *American College of Sports Medicine*

National Convention, Seattle, WA, May 1993.

EMG Power Spectrum Analysis Based on Initial Strength Level During
Maximal Isometric Wrist Flexions. Presented at *American Alliance of
Health, Physical Education, Recreation & Dance* National Convention,
Washington, DC, March, 1993.

Presentations at Regional Conventions

Hilliard, Timothy S. Strength & Skill: Nervous System Phenomena. Invited Presentation at
York State convention of the *Alliance of Health, Physical Education, Recreation &
Dance*. November, 1999

Monica Maldari

PRESENTATIONS/PUBLICATIONS:

A Comparison of the Physiological and Psychological Effects of Exercise on a Virtual
Reality Recumbent vs. a Non-Virtual Reality Recumbent Cycle (graduate thesis)

National Convention of the American College of Sports Medicine, Denver, Colorado, May
1997

A Comparison of the Physiologic Responses to Self-selected Exercise Intensity on the
Rowbike, Treadmill, and Bicycle. L. Naser, J.P. Porcari, M. Maldari, J. Zedaker

National Convention of the American College of Sports Medicine, Orlando, Florida, May
1998

“Virtual Motivation,” Porcari, J.P., Zedaker, J.M., Maldari, M.M., Fitness Management,
December 1999

David Rice

PRESENTATIONS

<u>5/2009</u>	National Meeting of the American College of Sports Medicine in Seattle, WA. “Differences in Psychosocial Factors According to Physical Activity Levels in Males and Females”.
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- 5/2007 National Meeting of the American College of Sports Medicine in New Orleans, LA. **“Correlates of Walking for Exercise in a Young Adult Population”.**
- 6/2004 National meeting of the American College of Sports Medicine in Indianapolis, IN. **"Measuring Physical Activity in a Free-Living Environment".**

Jason Talanian

PUBLICATIONS

1. **J.L. Talanian & L.L. Spriet. The effects of low doses of caffeine on performance and metabolism in elite cyclist. *in submission.***
2. **J.L. Talanian, G.P. Holloway, L.A. Snook, G.J.F. Heigenhauser, A. Bonen & L.L. Spriet. Exercise Training increases sarcolemmal and mitochondrial fatty acid transport proteins in human skeletal muscle. *Am J Physiol Regul Integr Endocrinol Metab.* 2010, 299 (2), p. 180-188.**
3. **J. Quadrilatero, E. Bombardier, S.M. Norris, J.L. Talanian, M.S. Palmer, H.M. Logan, A.R. Tupling, G.J. Heigenhauser & L.L. Spriet. Prolonged moderate-intensity aerobic exercise does not alter apoptotic signaling and DNA fragmentation in human skeletal muscle. *Am J Physiol Regul Integr Endocrinol Metab.* 2010, 298 (3), p. 534-547.**
4. **S.D.R. Galloway, J.L. Talanian, A.K. Shoveller, G.J.F. Heigenhauser & L.L. Spriet. Seven days of oral taurine supplementation does not increase muscle taurine content or alter substrate metabolism during prolonged exercise in humans. *J Appl Physiol.* 2008, 105 (2), p. 643-651.**
5. **L.L. Spriet, Christopher G.R. Perry & J.L. Talanian. Legal pre-event nutritional supplements to assist energy metabolism. *Essays Biochem.* 2008, 44, p. 27-43.**
6. **J.L. Talanian, S.D.R. Galloway, G.J.F. Heigenhauser, A. Bonen & L.L. Spriet. Two weeks of high-intensity aerobic interval training increases the capacity for fat oxidation in women. *J Appl Physiol.* 2007, 102 (4), p.1439-1447.**
7. **C.G.R. Perry, J.L. Talanian, G.J.F. Heigenhauser & L.L. Spriet. The effects of training in hyperoxia vs normoxia on skeletal muscle enzyme activities and exercise performance. *J Appl Physiol.* 2007, 102 (3), 1022-1027.**
8. **J.L. Talanian, R.J. Tunstall, M.J. Watt, M. Duong, C.G.R. Perry, G.R. Steinberg, B.E. Kemp, G.J.F. Heigenhauser & L.L. Spriet. Adrenergic regulation of HSL serine phosphorylation and activity in human skeletal muscle during the onset of exercise. *Am J Physiol Regul Integr Comp Physiol.* 2006. 291 (4), 1094-1099.**

Danielle Wigmore

PRESENTATIONS

“Describing the cycle of assessment and program improvement in an assessment report”, Fitchburg State University Assessment Day—Fitchburg, MA, January 2012. (Slide Presentation)

“Using internships for assessment”, Fitchburg State College Assessment Day—Fitchburg, MA, January 2010. (Slide Presentation)

“Assessment efforts: EXSS department”, Fitchburg State College Assessment Day—Fitchburg, MA, May 2008. (Slide Presentation)

“Role of cellular oxygen in age-related differences in muscle fatigue during incremental contractions”, American College of Sports Medicine annual conference--New Orleans, LA, June 2007. (Slide Presentation)

“In vivo assessment of intracellular oxygenation during fatiguing isometric contractions of the ankle dorsiflexors”, American College of Sports Medicine annual conference--Denver, CO, June 2006. (Poster Presentation).

“Skeletal muscle perfusion and oxygenation: Impact of contraction intensity and age”, Seminar, University of New Hampshire--Durham, NH, February 2006. (Slide Presentation)

“Skeletal muscle perfusion and oxygenation: effects of contraction intensity”, New England Regional Chapter of the American College of Sports Medicine annual conference—Providence, RI, November 2005. (Invited presentation)

“Skeletal muscle fatigue is related to a mismatch between oxygen delivery and usage”, Workshop on Investigation of Human Muscle Function *in Vivo*—Nashville, TN, October 2005. (Poster Presentation)

“In vivo muscle intracellular oxygenation by MR spectroscopy: effect of age”, Graduate Seminar, University of Massachusetts--Amherst, MA, May 2005. (Slide Presentation)

“Perfusion of human skeletal muscle: new applications of fMRI”, MRS of Skeletal Muscle Seminar, Yale University Magnetic Resonance Research Center--New Haven, CT, February 2005. (Slide Presentation)

“Does blood flow limit force production during incremental isometric contractions?”, Integrative Biology of Exercise APS Intersociety Meeting--Austin, TX, October 2004. (Poster Presentation)

“Perfusion of human skeletal muscle: utility of fMRI”, Graduate Seminar, University of Massachusetts--Amherst, MA, March 2004. (Slide Presentation)

“Comparable post-exercise muscle hyperemia measured by MRI and plethysmography”, American College of Sports Medicine annual conference--San Francisco, CA, June 2003. (Poster Presentation)

“Comparable post-exercise muscle hyperemia measured by MRI and plethysmography”, School of Public Health Annual Poster Session, University of Massachusetts--Amherst, MA, April 2003. (Poster Presentation)

"MRI measures of muscle perfusion and the role of contraction intensity", American College of Sports Medicine annual conference--St. Louis, MO, June 2002. (Poster Presentation)

"MRI measures of muscle perfusion and the role of contraction intensity", School of Public Health Annual Poster Session, University of Massachusetts-- Amherst, MA, April 2002. (Poster Presentation)

"Gender, but not age, affects relative fatigue during sustained maximal voluntary isometric contractions" American College of Sports Medicine annual conference--Baltimore, Maryland, June 2001. (Poster Presentation)

“The effect of hyperbaria on intense intermittent anaerobic exercise in college age women” Mid Atlantic Regional Chapter of the American College of Sports Medicine annual conference--Penn State, November 1997. (Slide presentation)

“Comparison of submaximal cycling exercise in hyperbaric and normobaric conditions” Mid Atlantic Regional Chapter of the American College of Sports Medicine annual conference--Baltimore, Maryland, November 1995. (Poster Presentation)

PUBLICATIONS

D.M. Wigmore, B. Fernhall, D.L. Smith. Cardiovascular responses to acute aerobic exercise. In: *Advanced cardiovascular exercise physiology* (pp.139-162). Champaign, IL: Human Kinetics, 2011.

D.M. Wigmore, B. Fernhall, D.L. Smith. Cardiovascular adaptations to aerobic training. In: *Advanced cardiovascular exercise physiology* (pp.163-1178). Champaign, IL: Human Kinetics, 2011.

- D.M. Wigmore**, D.E. Befroy, I.R. Lanza, J.A. Kent-Braun. Contraction frequency modulates muscle fatigue and the rate of myoglobin desaturation during incremental contractions in humans. *Appl Phys Nutr Metab* 33(5): 915-921, 2008.
- D.W. Russ, T.F. Towse, **D.M. Wigmore**, I.R. Lanza, J.A. Kent-Braun. Contrasting influences of age and sex on muscle fatigue. *Med Sci Sport Ex.* 40(2): 234-241, 2008.
- I.R. Lanza, **D.M. Wigmore**, D.E. Befroy, J.A. Kent-Braun. In vivo ATP production during free-flow and ischaemic muscle contractions in humans. *J Physiol* 577 (Pt1): 353-367, 2006.
- D.M. Wigmore**, K. Propert, J.A. Kent-Braun. Blood flow does not limit skeletal muscle force production during incremental isometric contractions. *Eur J Appl Phys* 96(4): 370-378, 2006.
- Kent-Braun JA, BM Damon, **DM Wigmore**, DM Pober. BOLD indirect versus ASL direct measurement of muscle perfusion: a reply [letter]. *J Appl Physiol* 99(1): 376-377, 2005
- D.M. Wigmore**, B.M. Damon, D.M. Pober, J.A. Kent-Braun. MRI measures of perfusion-related changes in human skeletal muscle during progressive contractions. *J Appl Physiol* 97(6): 2385-2394, 2004
- Damon, B.M., **D. Wigmore**, Z. Ding, J.C. Gore, J.A. Kent-Braun. Cluster analysis of muscle functional MRI data. *J Appl Physiol* 95(3): 1287-1296, 2003.
- Lanza, I.R., G.E. Caldwell, T.F. Towse, **D.M. Wigmore**, J.A. Kent-Braun, FACSM. Effects of age on human muscle torque, velocity and power in two muscle groups. *J Appl Physiol*, 95(6): 2361-2369, 2003
- Bartholomew, D.M.**, B.M. Damon, J.C. Gore, J.A. Kent-Braun. Comparable post-exercise muscle hyperemia measured by MRI and plethysmography. *Med. Sci. Sports Exerc.* 35(5): S388, 2003 [abstract]
- DW Russ, **DM Bartholomew**, TF Towse, and JA Kent-Braun, FACSM. Influence of duty cycle on sex differences in fatigue during maximum-effort exercise. *MSSE* 35(5): s145, 2003 [abstract]
- Sakkas, G., J. Kent-Braun, K. Mulligan, J. Doyle, M. Knudsen, I. Lanza, **D. Bartholomew**, M. DaSilva, T. Schleich, M. Schamben. Muscle specific strength, Intramuscular energy metabolism, and other indices of mitochondrial function are not altered in HIV-infected patients with marked peripheral lipoatrophy. [abstract to International Society of Magnetic Resonance in Medicine—Toronto, Canada, 2003]
- Towse, T.F., P. Sacco, D. Russ, **D.M. Bartholomew**, JA Kent-Braun, FACSM. Fatigue and central activation failure in young and older adults. [abstract] Presented at Experimental Biology--New Orleans, LA, April 2002

Kent-Braun, J.A. FACSM, A.V. Ng, FACSM, J. Doyle, F. Beaudoin, **D. Bartholomew**. Gender, but not age, affects relative fatigue during sustained maximal voluntary isometric contractions. *Med. Sci. Sports Exerc.* 33(5): S262, 2001 [abstract]

Faculty Community Services

David Antaya

- Volunteer for MICCA Finals at LeLacheur Field, Lowell, MA, 2007
- Co-led Venture Scout Cycling on Block Island, Rhode Island, 2006
- Co-led Venture Sunrise Hike up Mount Monadnock, 2006
- Assisted with Girl Scout field trip to the Boston Aquarium, 2006
- Co-led Venture Scout Cycling on the C & O Towpath, Spring Gap, Maryland to Washington, D.C., 2005
- Assisted with field day at the Waterford Street School, Gardner, 2005
- Co-led Venture Scout Group on Mt. Greylock Camping Trip, 2004
- Eucharistic Minister, Sacred Heart Church in Gardner, MA, 2004 – Present
- Assisted in organizing the actual painting of St. Paul's Church hall in Gardner, MA where the Girl Scouts have their meetings, 2003
- Volunteer for MICCA Finals at Bowditch Field, Framingham, MA, 2003-2004
- American Red Cross Health Safety Committee member, North Central Massachusetts Chapter of the American Red Cross, 2003 – 2005
- "Notes to Neighbors" Campaign for American Cancer Society, 2002
- Volunteered for the MICCA preview show at Gardner High School, 2002-2004, 2005-2007
- Led a Girl Scout Canoeing Trip at Camp Collier, 2002
- Conducted a canoe paddle repair workshop for the Girl Scouts at Camp Green Eryre, 2002
- Active member of the Gardner Music Boosters Association, 2001 – 2007
- Volunteered for the Gardner Band Booster Club Spaghetti Dinner fundraiser, 2001
- Lifeguarded for a Girl Scout swim program, 2000
- Member of the Gardner Zoning Board of Appeals, 2000- 2007
- Member of the North Central Pathway (participating in the building, fund raising, and maintenance of a 15 mile recreation trail between Gardner and Winchendon), 1995 – Present

Jeffrey Godin

- FSU, Faculty Seminar Series, "Open and Closed Kinetic Chain Resistance Training and Physical performance in Older Adults", 2006
- FSU, Leadership Conference, "Stress management", 2006

- Greenwich, Connecticut, Fire and Rescue – Conducted fitness assessment for fire and rescue candidates, 2002.
- Multi-service Center, Leominster, MA – Presentation to senior group: Exercise and Osteoporosis, 2002.
- FSU, Leadership Conference – Presentation to students: Leadership through physical activity and wellness, 2002.
- FSU, Health Fair – Presentation to students, faculty, and staff: Weight loss and dietary supplements, 2002
- FSU, Leadership Conference – Presentation to Students: Applying a Customer Service Frame of Mind in Your Everyday Life, 2003
- FSU, Professional Development – Presentation to Student Affairs Division: Physical Activity and Health, 2003
- FSU Health Fair, 2003-2005
- FSU, Focus on Majors EXPO 2004
- Exercise and Older Adults Seminars
 - o March 2003, Fitchburg Senior Center
 - o January 2001, Fitchburg Senior Center
 - o February 2001, Fitchburg Green Community living Center
 - o June 2001, Friendship Club

Monica Maldari

- Volunteer at Stow, MA food pantry

Jason Talanian

- Boys & Girls Club, fund raiser, 2002
- Volunteer basketball coaching, Wellington Catholic School District, 2002
- Sacramento Police Athletic League Basketball Camp, 2001
- Volunteer basketball coach, St. Mary's School, 2009-2010
- Recreation Manager, Turning Point Rehabilitation Center, 1998

Danielle Wigmore

- Senior Centers, Western Massachusetts, presentations on the role of exercise in healthy aging, 2004-2006
- FSU Healthy Body, Healthy Mind Week, organized cholesterol screening, 2008

Courses Taught by EXSS Faculty

David Antaya

- EXSS 1000: Health and Fitness
- EXSS 2500: Human Motor Development
- EXSS 4200: Senior Seminar
- EXSS 1140: Leadership in the Outdoors
- LEAD 1151: Experiential Approaches to Wellness
- EXSS 1460: American Red Cross CRP, AED, and First Aid
- EXSS 1060: Badminton
- EXSS 1300: Recreational Sports
- EXSS 1500: Lifeguarding
- EXSS 4060: Outdoor Education
- EXSS 1150: Canoeing
- EXSS 1180: Backpacking
- EXSS 1280: Orienteering

Jeffrey Godin

- EXSS 1000: Health and Fitness
- EXSS 2070: Exercise Physiology
- EXSS 2300: Nutrition in Exercise and Sport
- EXSS 3050: Adaptations
- EXSS 3120: Scientific Foundations of Strength and Conditioning
- EXSS 3300: Exercise Metabolism
- EXSS 4040: Fitness Management
- EXSS 3450: Exercise Testing and Prescription
- EXSS 2050: Functional Anatomy
- EXSS 1520: Diet , Exercise and Weight Control
- EXSS 1440: Body Shaping
- EXSS 1070: Introduction to Mountain Hiking
- EXSS 2080: Weight Training for Athletes
- EXSS 1400: Jogging: Theory and Practice

Timothy Hilliard

- EXSS 1000: Health and Fitness
- EXSS 1011: Introduction to Exercise Science
- EXSS 2050: Functional Anatomy
- EXSS 3020: Biomechanics
- EXSS 3120: Scientific Foundations of Strength Training and Conditioning
- EXSS 4025: Motor Learning and Control of Human Movement
- EXSS 4045: Cardiovascular Physiology and Electro Physiology

Monica Maldari

- EXSS 1000: Health and Fitness
- EXSS 1011: Introduction to Exercise Science
- EXSS 3600: Exercise Responses and Adaptations in Special Populations
- EXSS 4045: Cardiovascular Physiology and Electro Physiology

David Rice

- EXSS 1000: Health and Fitness
- EXSS 1011: Introduction to Exercise Science
- EXSS 2071: Exercise Physiology I
- EXSS 2072: Exercise Physiology II

Jason Talanian

- EXSS 1000: Health and Fitness
- EXSS 2500: Human Motor Development
- EXSS 3120: Scientific Foundations of Strength Training and Conditioning
- EXSS 3450: Exercise Testing and Prescription

Michael Ward

- EXSS 1000: Health and Fitness
- EXSS 2300: Nutrition in Sport and Exercise
- EXSS 3120: Scientific Foundations of Strength & Conditioning

Danielle Wigmore

- EXSS 1000: Health and Fitness
- EXSS 2071: Exercise Physiology I
- EXSS 2072: Exercise Physiology II
- EXSS 3600: Exercise Responses and Adaptations in Special Populations
- EXSS 4045: Cardiovascular Physiology and Electro Physiology

Appendix
List of Faculty Curricula Vitae

David Antaya

444 Stone Street	Fitchburg State College
Gardner, MA 01440	Exercise and Sport Science Department
dantaya@fsc.edu	Fitchburg, MA 01420
(978) 630-2811	(978) 665-3673

Education:

Ed.D., Leadership In Schooling, February 1998

University of Massachusetts at Lowell

Lowell, Massachusetts 01854

Teaching Fellow, 1983-1984

Springfield College

Springfield, Massachusetts 01095

M.A., Outdoor Education, June 1978

University of Northern Colorado

Greeley, Colorado 80693

B.S., Physical Education, May 1973

University of Massachusetts

Amherst, Massachusetts 01002

Experience:

PROFESSOR OF EXERCISE AND SPORT SCIENCE

Chairperson, 2000-2006

Fitchburg State College

160 Pearl Street, Fitchburg, Massachusetts 01420

Assisted in the development of the Exercise and Sport Science major; wrote part of the Department's program review; co-developed a graduate certificate in Outdoor Adventure Education; assisted in the development, redesigning, and implementation of 4 Tech Prep Leadership Programs; taught Health and Fitness; Red Cross Certificate courses (Standard First Aid, CPR, HIV/AIDS, Canoeing, and Lifeguarding), Camp Counseling, Recreational Leadership, Badminton, Downhill Skiing, Backpacking, and Recreational Sports; developed and instructed new courses (Senior Seminar, Human Motor Development, Leadership in the Outdoors, Orienteering, Outdoor Education, Programs in Recreation, and Leadership in the Outdoors). Developed new graduate courses (Foundations of Outdoor-Based Adventure Education, Programs in Outdoor-Based Adventure Education, Essential Skills of Outdoor-Based Adventure Education, Leadership in Outdoor-Based Adventure Education, and Personal Internship in Outdoor-Based Adventure Education); Department Coordinator for Graduate and Continuing Education; member of the All College Committee, the All College Curriculum Committee, Tenure Committee, Liberal Arts and Science Committee, member of many hiring committees for the Exercise and Sport Science Department and other departments at the College; instructed leadership workshops and ropes course experiences for clubs and organizations on campus; supervise internships and advise Exercise and Sport Science majors.

1993 - 2000

LEAD INSTRUCTOR

Mountain LYNX

Ashburnham, Massachusetts 01430

Director: Bob Tremblay

Instructed: white water canoeing, rock climbing, hiking, camping, and ropes courses, corporate group initiatives; and a member of the Educational Review Board.

1974 – 1980

**OUTDOOR EDUCATION INSTRUCTOR, INTRAMURAL
DIRECTOR AND EQUIPMENT MANAGER**

Northern Essex Community College

Department of Sport and Leisure Studies

Haverhill, Massachusetts 01830

Instructed: Outdoor Adventure Skills; organized, promoted, and implemented the Intramural Program; responsible for the maintenance, control and inventory of athletic and recreation equipment. Also, led cycling, backpacking, rock climbing, and canoeing trips.

Summers of

1978 – 1980

CAMP DIRECTOR

Tricklin' Falls Day Camp

YMCA Civic Center

96 State Street

Newburyport, Massachusetts 01950

Responsible for staffing, programming, scheduling, purchasing of equipment, and daily operation of the camp.

1973 – 1977

PHYSICAL DIRECTOR / OUTDOOR TRIP LEADER

YMCA Civic Center

96 State Street

Newburyport, Massachusetts 01950

CONFERENCES

ATTENDED :

March 2007	Articulation Agreements Quinsigamond Community College
November 2006	Massachusetts Association for Health, Physical Education, Recreation, and Dance (MAHPERD) Worcester, Massachusetts
April 2006	American College of Sports Medicine Fitchburg State College
March 2006	Massachusetts Association for Health, Physical Education, Recreation, and Dance Worcester, Massachusetts
April 2005	Tech Prep Leadership Workshop Fitchburg State College
April 2005	Fitchburg State College 8 th Annual Leadership Conference
October 2004	Tech Prep National Conference Minneapolis, Minnesota
July 2004	The Citizens Planner Training Collaborative “Level I Curriculum in Local Planning and Zoning” Mount Wachusett Community College
February 2004	Leadership Workshop for Middle School

Fitchburg Public Schools

November 2003

Massachusetts Tech Conference

Fitchburg State College

October 2003

Tech Prep National Conference

Nashville, Tennessee

March 2003

American College of Sports Medicine Workshop

University of New Hampshire

Durham, New Hampshire

March 2003

MAHPERD

Worcester, Massachusetts

March 2003

Personal Training, NEACSM

Durham, New Hampshire

October 2002

National Tech Prep Conference

Cincinnati, Ohio

October 2002

"ZBA Workshop on Special Permits and Variances"

Mount Wachusett Community College

May 2002

Title I Conference

Hyannis, Massachusetts

March 2002	Massachusetts Association for Health, Physical Education, Recreation, and Dance (MAHPERD) Worcester, Massachusetts
March 2002	Earth Connection UMASS, Amherst
April 2001	Project Adventure Workshop "Wellness Through Adventure" Beverly, Massachusetts
November 2000 – 2006	American College of Sports Medicine Providence, Rhode Island
July 2000	Diversity in Leadership Conference Fitchburg State College
Spring 2000	"Reading a Subdivision Plan" Citizens Planner Training Collaborative Mount Wachusett Community College
September 1999	NEACSM and NEHRSA Conference Rhode Island Convention Center Providence, Rhode Island

CONFERENCE
PRESENTATIONS :

November 2006	NAWWG Consortium
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Orienteering Workshop for Physical Education Teachers

April 2005	<p>“Collaboration Experimentation to Unmasking Your Inner Leader”</p> <p>Fitchburg State College 8th Annual Leadership Conference</p>
April 2005	<p>Tech Prep Leadership Workshop</p> <p>Fitchburg State College</p>
October 2004	<p>“Corporate, College Consortium and Kids Combine Team Building and Leadership”</p> <p>Tech Prep National Conference</p> <p>Minneapolis, Minnesota</p>
February 2004	<p>“Leadership Workshop for Middle School”</p> <p>Fitchburg Public Schools</p> <p>Fitchburg State College</p>
November 2003	<p>“Merging Leadership, Assessment, and Career Planning”</p> <p>Massachusetts Tech Conference</p> <p>Fitchburg State College</p>
October 2003	<p>“Merging Leadership, Assessment, and Career Planning”</p> <p>Tech Prep National Conference</p> <p>Nashville, Tennessee</p>
March 2003	<p>“Orienteering”</p> <p>MAHPERD</p>

Worcester, Massachusetts

October 2002 “Experiential Interdisciplinary Leadership”
National Tech Prep Conference
Cincinnati, Ohio

May 2002 “Experience Interdisciplinary Leadership”
Title I Conference
Hyannis, Massachusetts

March 2002 “Interdisciplinary Experiential Leadership”
Earth Connection
UMASS, Amherst

March 2002 “Orienteering Thru Leadership”
MAHPERD State Convention
Worcester, Massachusetts

July 2000 Diversity in Leadership Conference
Fitchburg State College
Initiative Activities / Ropes Course

Confidence Course Trainings:

8/30/07 Fitchburg State College, ACCESS Program
8/31/07 Fitchburg State College, Expanding Horizons
8/31/04 Fitchburg State College, RA's
9/11/04 Fitchburg State College, Expanding Horizons
10/28/03 Fitchburg State College, Expanding Horizons
8/28/02 Fitchburg State College, Expanding Horizons

8/25/02	Camp Harrington YMCA Camp Orientation
8/23/02	Fitchburg State College, Student Life

Tech Prep Leadership Presented Programs:

Women in Technology	09/02/05, 09/12/05, 10/01/04, 09/25/04, 09,30,03, 09/10/02 & 09/13/02.
Senior Leadership	*Only Tech Prep Leadership Program for Seniors "Only" in MA 05/16/05, 02/13/04, 12/12/03, 05/06/03, 12/03/03 & 02/04/03.
Junior Leadership	05/06/05, 04/30/04, 12/06/03, 05/02/03, 01/09/03, 02/07/03, 12/07/01 & 02/08/02.
Project GO	09/16/05.
Ambassador Leadership	09/23/05, 12/02/05, 02/17/06, 05/18/06 & 05/19/06.

Fitchburg State College Hiring Committees:

Spring 2007	Secretary, Exercise and Sport Science Department
Spring 2006	Exercise Scientist
Fall 2005	Staff Assistant, Recreational Programming
Fall 2005	Assistant Director, Recreational Services
Spring 2005	Exercise Physiologist
	Exercise Scientist
Fall / Spring 2004-2005	Recreation Center/Athletic Director
Fall 2004	Dean of Curriculum and Instruction

Spring 2001	Director, Recreation Center
Spring 2001	Dance Instructor
Spring 2001-2006	7 Adjunct Faculty
Fall 2000 & 2001	Aquatic Director (2 positions)
Spring 2000	Exercise Physiologist
Spring 2000	Director, Fitness Center
Spring 2000	Director, Recreation Center

Committees:

Spring 2007	Dr. Jeffrey Godin's Tenure Committee
2005 – 2007	All College Committee
2004 – Present	Liberal Arts and Science Council to review the LA & S requirements
May 2004	MSCA Delegate Assembly at Salem State College
April 2003	MSCA Delegate Assembly at Fitchburg State College
2000 – Present	Exercise and Sport Science Curriculum Committee
September 2000	Recreation Center Grand Opening Planning Committee member
July 2000	Diversity in Leadership Conference, Fitchburg State College
1998 – 2002	ACC Curriculum Committee

Other:

Summer 2005, 2007	Taught Lifeguarding course for Fitchburg State College Recreation Center.
May 16-27, 2003	Quartermaster for GEO Club field trip to Mammoth Cave National Park in Kentucky.
May 17-24, 2002	Quartermaster for GEO Club field trip to Utah and Colorado.
November 2001	Presented a slide show about the Colorado River for Dr. Robert Champlin's GEO Morphology class.
October 2000	Taught CPR to Fitchburg State College's Recreation Center employees.
September 2000	Taught CPR to Fitchburg State College's Recreation Center employees.
May 1999	Quartermaster for GEO Club field trip to Utah/Colorado to find dinosaur fossils.

May 1998	Quartermaster for GEO Club field trip to the Grand Canyon.
May 14-21, 1993	Quartermaster for GEO Club field trip to Cape Hatteras, North Carolina
May 14-22, 1992	Quartermaster for GEO Club field trip to Colorado and Utah.
May 14-21, 1989	Quartermaster for GEO Club field trip to Cape Hatteras, North Carolina.
May 15-22, 1988	Quartermaster for GEO Club field trip to Nova Scotia.
May 18-25, 1986	Quartermaster for GEO Club field trip to Mammoth Cave National Park in Kentucky.

ADVISING:

- Advise 25⁺ Exercise and Sport Science Majors (EXSS)
- Summer 2007, four SOAR Registration Sessions
- Summer 2006, two SOAR Registration Sessions
- Summer 2005, two SOAR Registration Sessions
- January 2004, Orientation and Advising for new students in the EXSS major.
- August 2004, four SOAR Registration Sessions
- June 2003, Advised three sessions of Freshman Orientation
- Mentored many Life Experience Credit Award Programs (LECAP)
- Advised Pre-major students in the Academic Advising Center

RECRUITING NEW STUDENTS:

- November 2006, Open House for EXSS Majors
- September 2006, On Campus Student Recruitment
- October 2005, Two Open Houses for Potential New Majors
- April 2005, President's Reception for Accepted Students
- April 2004, Coordinated and Presented for new Exercise and Sport Science perspective students visit.
- April 2004, "Focus on Your Major" Expo at Fitchburg State College
- March 2002 & November 2002, Participated in the Fitchburg State College Open House for

perspective students.

- November 2000, Leadership Academy Open House.

COMMUNITY

SERVICE:

Greater

Community

October 2007	Volunteer for MICCA Finals at LeLacheur Field, Lowell, MA
August 25-27, 2006	Co-led Venture Scout Cycling on Block Island, Rhode Island
July 8, 2006	Co-led Venture Sunrise Hike up Mount Monadnock
June 2006	Assisted with Girl Scout field trip to the Boston Aquarium
August 14-22, 2005	Co-led Venture Scout Cycling on the C & O Towpath, Spring Gap, Maryland to Washington, D.C.
June 2005	Assisted with field day at the Waterford Street School, Gardner.
December 2004	Co-led Venture Scout Group on Mt. Greylock Camping Trip
September 2004 – Present	Eucharistic Minister, Sacred Heart Church in Gardner, MA.
November 2003	Assisted in organizing the actual painting of St. Paul's Church hall in Gardner, MA where the Girl Scouts have their meetings.
October 2003, 2004	Volunteer for MICCA Finals at Bowditch Field, Framingham, MA
January 2003 – 2005	American Red Cross Health Safety Committee member, North Central Massachusetts Chapter of the American Red Cross.
Fall 2002	"Notes to Neighbors" Campaign for American Cancer Society
October 2002, 2003, 2004, 2005, 2007	Volunteered for the MICCA preview show at Gardner High School.
July 2002	Led a Girl Scout Canoeing Trip at Camp Collier
February 2002	Conducted a canoe paddle repair workshop for the Girl Scouts at Camp Green Eryre.
September 2001 – 2007	Active member of the Gardner Music Boosters Association.
March 2001	Volunteered for the Gardner Band Booster Club Spaghetti Dinner fundraiser.
October 2000	Lifeguarded for a Girl Scout swim program
January 2000- August 2007	Member of the Gardner Zoning Board of Appeals

May 1995 – Present	Member of the North Central Pathway (participating in the building, fund raising, and maintenance of a 15 mile recreation trail between Gardner and Winchendon. The trail is 50% completed)
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RED CROSS COURSES TAUGHT:

May 2007	Lifeguarding
Spring 2007	CPR / First Aid
Spring 2006	Standard First Aid and CPR to Girl Scouts
January 2005	Standard First Aid / CPR / AED
May 2005	Lifeguarding
October 2005	First Aid/Adult and Child CPR for Girl Scouts
May 2004	Lifeguarding
February 2004	Standard First Aid / CPR / AED
Fall 2002	Lifeguarding
Summer 2001	Community CPR
September 2000	CPR for Fitchburg State College Recreation Center employees
October 2000	CPR for Fitchburg State College Recreation Center employees

CERTIFICATIONS:

Spring 2007	Lifeguarding Retraining
Fall 2006	CPR Professional Rescuer and First Aid Retraining
June 2006	Standard First Aid / CPR / AED
June 2003	American Red Cross Lifeguarding Instructor Trainer
May 2002	Certified Pool Operators Certificate
December 2001	American Red Cross Lifeguard Retraining
March 2001	SOLO Wilderness First Aid

AWARDS :

- North Central Tech Prep Consortium for Outstanding Contributions 2002 to 2003 School Year
- North Central Tech Prep Consortium for Outstanding Contributions 2001 to 2002 School Year Special Promotional Activities
- 2000 Fitchburg State College Leadership Award

Department Chairperson (2000 – 2006)

- New Exercise and Sport Science Major (2002)
- 120 majors in four years
- Exercise and Sport Science 5 Year Program Review (June 2004)
- Hired 5 Exercise and Sport Science tenured track faculty positions
- Hired 7 Adjunct Faculty Members
- Coordinated and participated in Fitchburg State College Open Houses, Student Visitation Days, SOAR Program for the Exercise and Sport Science Department, and President's Reception for new students.
- Developed two new courses for the EXSS Major: Motor Development and Senior Seminar.
- Advisor for Robert Tremblay's masters practicum, second reader for his thesis, and faculty liaison with Prescott College.
- Department Coordinator for Graduate and Continuing Education

**Professional
Memberships**

New England American College of Sports Medicine; Appalachian Mountain Club;
Massachusetts Association for Health, Physical Education, Recreation, and Dance

JEFFREY T. GODIN

52 Edward Drive
N. Grafton, MA 01536

W: (978) 665-3716

H: (774) 571-0845

jgodin@fitchburgstate.edu

EDUCATION

Graduate:

University of Connecticut, Storrs, Connecticut

Doctorate of Philosophy, Kinesiology: Exercise Science

Dissertation Defense April 2002, Degree Conferred May 2002

Bridgewater State College, Bridgewater, Massachusetts

Master of Science

Physical Education: Human Performance/Fitness, May 1996

Undergraduate:

Bridgewater State College, Bridgewater, Massachusetts

Bachelor of Science

Physical Education: Exercise Science, May 1990

Certifications:

American College of Sports Medicine: Certified Health Fitness Program Director (2002 – Present)

American College of Sports Medicine: Certified Health Fitness Instructor (1991 – Present)

National Strength and Conditioning Association: Certified Strength and Conditioning Specialist (1993 – Present)

American Heart Association CPR/AED/ First Aid (1991 – Present)

American Safety and Health Institute CPR/ First Aid Instructor (2004 – Present)

American Council on Exercise: Certified Personal Trainer (2004 – Present)

International Society for Sport Nutrition: Certified Sport Nutritionist (2006-Present)

Certified Cycling Coach, USA cycling (2007-Present)

NSCA Fly Solo Mentor (2007-present)

Certified USA Triathlon Coach (2009)

TEACHING/PROFESSIONAL EXPERIENCE

Associate Professor, Department of Exercise and Sport Science, September 2000 - Present
Fitchburg State University, Fitchburg, MA

Courses Taught

- EXSS 1000: Health and Fitness (3 credits)
 - o Presented lectures in health related components of physical fitness, fitness assessment, exercise programming, energy expenditure, and nutrition.
- EXSS 2070: Exercise Physiology (3 credits)
 - o Presented lectures human systemic response to exercise and exercise training.
- EXSS 2300: Nutrition in Exercise and Sport (3 credits)
 - o Presented lectures in nutrition to support physical activity and exercise training.
- EXSS 3050: Adaptations (3 credits)
 - o Presented lectures in an interdisciplinary course in biology and exercise physiology that integrates human adaptations to the environment and human adaptation to exercise.
- EXSS 3120: Scientific Foundations of Strength and Conditioning (3 credits)
 - o Presented lectures in theoretical and practical aspects of strength and conditioning.
- EXSS 3300: Exercise Metabolism (3 credits)
 - o Presented lectures on substrate metabolism during exercise and hormonal control of metabolism.
- EXSS 4040: Fitness Management (3 credits)
 - o Presented lectures in planning, implementing, and evaluating fitness programs in the commercial setting.
- EXSS 3450: Exercise Testing and Prescription (4 credits)
 - o Presented lectures and labs on the design and implementation of exercise testing protocols.
- EXSS 2050: Functional Anatomy (3 credits)
 - o Presented labs and activities related to structure of the musculoskeletal system and how it function during human movement.

One Credit Activity Courses

- EXSS 1520: Diet , Exercise and Weight Control
- EXSS 1440: Body Shaping
- EXSS 1070: Introduction to Mountain Hiking
- EXSS 2080: Weight Training for Athletes
- EXSS 1400: Jogging: Theory and Practice

Program/course development

- Work with Department members developing a proposal for new Exercise Science Major including the development of new courses and curriculum.
 - o New courses accepted by Curriculum Committee and Board of Trustees, May 2001
 - o New major accepted by Curriculum Committee and Board of Trustees, May 2001
 - o New Major accepted by Board of Higher Education, November 2001
- Represented the Department during Recreation Center Grand Opening including a demonstration of metabolic testing in Exercise Physiology Laboratory.
- Modified the course Health and Fitness to fit the needs of athletes. Course was adapted to include human performance related material suitable for the Fitchburg State College student athlete.
- Developed new online course, Physiology of Endurance Sports Performance and Training, December 2008

**Department Chair, Department of Exercise and Sport Science
Fitchburg State College, July 2008- present**

- Evaluated faculty effectiveness in teaching
- Coordinated departmental meeting regarding, assessment, course development and curriculum changes
- Coordinated effort to change curriculum changes in the major.

Fitness Director, Recreation Services, July 2000 – May 2004

Fitchburg State College, Fitchburg, MA

- Developed fitness center policy and procedures manual.
- Developed fitness center staff training manual.
- Trained students as Fitness Center Attendants.
- Conducted Fitness Center orientations for Health & Fitness courses in the Exercise and Sport Science Department.
- Quality of Life and Wellness Program in conjunction with Nursing Department
 - o Developed exercise program for patients in program
 - o Provided in-service training for nurses supervising patients
 - o Coordinated health history assessment and physicians consent for participants participation
- Fitness Center Web Page
 - o Developed exercise manual for download from the web.
- National Sports and Fitness Day, Spring 2002, 2003, 2004
 - o Organized a recreation center event that included fitness testing, fitness marathon, group exercise, sport tournaments, and a rock wall climb challenge.
 - o Conducted in conjunction with Fitness Management course
 - o Worked with students on developing plan, marketing, and implementing the program
- Group Exercise Program
 - o Developed group exercise program including hiring and training instructors, developing and implementing classes for all participants with varied fitness levels and abilities, and campus wide promotion.

Strength and Conditioning Coach, Recreation Services, July 2000 – May 2004

Fitchburg State College, Fitchburg, MA

- Developed and implemented in-season and pre-season strength and conditioning programs for football, men and women's soccer, men's and women's basketball, field hockey, and volleyball.
- Developed and implemented pre-season performance related fitness assessment for baseball, women's soccer, women field hockey, and softball team.
- Developed and implemented pre-season strength and conditioning program for baseball team.
- Fitchburg State College Athletics Strength and Condition Web page
 - o Put strength and conditioning programs on the web available for athletes to download.

Committee Work

Fitchburg State College, Fitchburg, MA

- Fitchburg State College Human Subjects Committee AY 2004 – 2005, 2005 – 2006, 2008-2009
- Fitchburg State College Curriculum Committee AY 2005 – 2009
- Fitchburg State College Athletics Hall of Fame, AY 2001 – 2002; 2002- 2003, 2003-2004, 2004 – 2005, 2005 - 2006
- Student Affairs, Professional Development Committee, September 2001 – 2002; 2002 – 2003; 2003-2004

- Fitchburg State College Academic Policies Committee AY 2001 - 2002
- Fitchburg State College Technology Advisory Committee AY 2002- 2003; 2003-2004
- Fitchburg State University NEASC Self Study, CO-Chair Standards 1-3, AY 2010-2011

Graduate Assistant for the Center for Health Fitness, 1996 – July 2000

University of Connecticut, Storrs, Connecticut

Director of Corporate Fitness/Wellness Center, Hamilton – Sundstrand, Windsor Locks, Connecticut, June 1999 – July 2000

- Supervise graduate assistants in the field of Fitness Management who are involved in the corporate fitness program. Additional responsibilities include: strategic planning for the development, implementation, and evaluation of programs, coordination of the maintenance of facilities, and ensuring customer satisfaction.

Lecturer and Laboratory Instructor, Fitness Management Program, Department of Sport, Leisure, and Exercise Science, Storrs, Connecticut, 1996 – July 2000.

- Fitness Management ESLE 259: Lectures on: “Marketing Fitness”, “Management”, “Exercise Psychology”, “Special Populations” and “Program Development”.
- Applied Anatomy and Kinesiology ESLE 262: Lectures on: “ Upper Extremity”, “Lower Extremity”, and “Spine and Thorax”. Instructed lab sessions on: “Muscle Identification” and “Kinesiological Evaluation of Exercise and Sport”.
- Assessment of Physical Capacities ESLE 261 and ESLE 301: Instructed lab sessions in: submaximal cardiorespiratory assessment, body composition, and muscle fitness assessment in undergraduate and graduate courses.

Connecticut’s Ad Hoc Committee for Physical Fitness Member, 1996 – July 2000.

- Serve as a committee member for the development of a pilot project that has resulted in the implementation a new fitness assessment protocol in Connecticut public schools. Assist in the development of testing protocols and testing manual. Serve as a resource for physical educators in Connecticut.

Head Trainer, Joints in Motion, Southern New England Chapter of the Arthritis Foundation, Rocky Hill, Connecticut, Fall 1997 – July 2000.

- Developed training manual for the Southern New England Chapter Arthritis Foundation. Directly responsible for the planning and implementation of training program for Joints in Motion participants. Plan bi-weekly long runs for participants including training seminars. Coordinate activities of assistant trainers.

Processing Coordinator New England Chapter of the American College of Sports Medicine, NEACSM Chapter Office, Storrs, Connecticut, January 1998 – July 1999.

- Supervised the daily operations of the New England Chapter Office. Actively involved in the planning and coordination of Fall and Spring conferences and Executive Board Meetings.

Assistant Workshop and Certification Director, ACSM Health Fitness Instructor Certification, 1998 – 1999.

- Assisted the workshop and certification directors in the coordination of the workshop and certification exam

Personal Training Coordinator, Center for Health Fitness, Storrs, Connecticut, August 1996 – July 1999.

- Coordinated personal training activities for the Fitness for Life program. Responsibilities included: interviewing, hiring, and training of staff. Distributed incoming inquiries to qualified personal trainers and evaluated trainer’s performance.
- Personal Training Workshop, Fall Semesters 1996 – 1998. Conducted workshop for undergraduate students in Fitness Management preparing them for careers in personal training.

Strength and Conditioning Coach, July 1999 – 2000**Franklin High School Ice Hockey, Franklin, Massachusetts**

- Designed pre- and in-season training program for ice-hockey athletes. Conducted training sessions that included strength, plyometric, agility, anaerobic, and flexibility components. Conducted physical performance testing of athletes. Taught Olympic lifting techniques to upper level athletes.

Graduate Assistant in Exercise Science, September 1994 – August 1995**Bridgewater State College, Bridgewater, Massachusetts**

- Assisted during laboratory classes including maximal and submaximal aerobic capacity assessment, hydrostatic weighing, measurement of lung volumes, and other health related fitness assessments. Maintained equipment in exercise physiology laboratory.

Director of Personal Training/Assistant Fitness Director, June 1990 – July 1996.**Boston Athletic Club, South Boston, Massachusetts**

- Managed and supervised fitness instructors that served a membership of 3,000. Supervised the development of personal training staff including staff training and evaluation. Supervise the day-to-day activities of the fitness center. Participated in wellness/health fairs at local corporations as a representative of the Boston Athletic Club

Strength and Conditioning Internship, May 1996 – August 1996**Boston University, Boston, MA**

- Studied the theory and practice of strength and conditioning under the guidance of head strength coach Mike Boyle. Implemented testing protocols and training programs for ice hockey, football, track and field, and field hockey collegiate athletes. Successfully practiced and performed the Olympic lifts. Taught Olympic lifting techniques to athletes.

PROFESSIONAL PRESENTATIONS

- New England Triathlon Symposium. Metabolic Efficiency. A one hour seminar presented to 50 multisport athletes and coaches. January, 2012
- New England Triathlon Symposium. Complex training for the endurance athlete. A one hour workshop presented to 50 multisport athletes and coaches. January, 2012
- New England Regional Chapter of the National Strength and Conditioning Association. A needs Analysis for Mud and Obstacle Racers. Presented to 40 Strength and Conditioning professionals. October, 2011.
- New England Triathlon Symposium. Nutrition Science: Applications for athletes. A one hour seminar presented to 50 multisport athletes and coaches. January, 2011
- New England Triathlon Symposium. Race Time: tapering for peak performance. A one hour workshop presented to 50 multisport athletes and coaches. January, 2011
- New England Health and Racquet Club Association Regional Conference. Perspective in the ultraendurance athlete: implications for diet and training. A one hour seminar presented to 25 fitness professionals. May, 2010.
- New England Multisport Expo. Fuel Up! A three hour workshop delivered to 25 endurance athletes. March, 2010.
- New England Triathlon Symposium. Exercise Physiology 101: Energy systems and performance. A one hour seminar presented to 50 multisport athletes and coaches. January, 2010
- New England Triathlon Symposium. Application of periodization principles in endurance athletes. A one hour workshop presented to 50 multisport athletes and coaches. January, 2010

New England Multisport Expo. Fluid and electrolyte needs during training and racing. A one hour presentation delivered to 100 endurance athletes. March, 2009.

New England Triathlon Symposium. Physiology of endurance training . A one hour seminar presented to 50 multisport athletes and coaches. February, 2009

New England Triathlon Symposium. Strength training for endurance athletes. A one hour workshop presented to 50 multisport athletes and coaches. February, 2009.

NIRSA Region1 presentation, Weight Loss supplements, A 1.5 seminar presented to recreation and fitness professionals. September 2008.

Seminar Presented over the internet (WEBINAR), New Wave Strength Training, A two hour presentation delivered to 30 strength and conditioning professionals. August, 2008.

New England Multisport Expo, Heart Rate Training and the Multisport Athlete. A one hour presentation delivered to 100 endurance athletes. March, 2008.

Seminar Presented over the internet (WEBINAR), Golf and tennis training, A two hour presentation delivered to 30 strength and conditioning professionals. August, 2007.

Seminar Presented over the Internet (WEBINAR), Last Chance Seminar: Peaking for endurance sports, a one hour presentation delivered to 25 athletes preparing for Lake Placid Ironman. July, 2007.

New England Multisport Expo, Dietary Supplementation and the multisport athlete. A one hour presentation delivered to 100 endurance athletes. March, 2007.

American Council on Exercise, Certified Personal Trainer 2 day workshop - Boston, MA July 2006, Sixteen hour workshop presented to attendees preparing for ACE-CPT exam.

National Strength and Conditioning Association, Certified Strength and Conditioning Coach 2 day symposium and workshop, Boston MA, July 2006. Sixteen hour workshop presented to attendees preparing for CSCS exam.

American Council on Exercise, Certified Personal Trainer 2 day workshop - Boston, MA April 2006, Sixteen hour workshop presented to attendees preparing for ACE-CPT exam.

National Strength and Conditioning Association, Certified Strength and Conditioning Coach 2 day symposium and workshop, Boston MA, March 2006. Sixteen hour workshop presented to attendees preparing for CSCS exam.

American Council on Exercise, Certified Personal Trainer 2 day workshop - Boston, MA January 2006, Sixteen hour workshop presented to attendees preparing for ACE-CPT exam.

American Council on Exercise, Certified Personal Trainer 2 day workshop - Boston, MA April 2005, Sixteen hour workshop presented to attendees preparing for ACE-CPT exam.

Exercise Etc. Fitness Conference, Houston, TX March 2005, presented five 2 hour workshops titled: "Plyometrics", "Assisted Stretching", "Exercise and the Shoulder", "Advanced Training with Resistance Tubing" and "Medicine Ball Training".

Exercise Etc. Fitness Conference, Los Angeles, CA, February 2005, presented five - 2 hour workshops titled: "Core Training", "Physiology of Strength Training", "Strength and Conditioning for Golf and Tennis", "Assisted Stretching" and "Strength and Conditioning for Skiing".

National Strength and Conditioning Association, Certified Strength and Conditioning Coach 2 day symposium and workshop, Boston MA, January 2005. Sixteen hour workshop presented to attendees preparing for CSCS exam.

American Council on Exercise, Certified Personal Trainer 2 day workshop, Boston, MA January 2005, Sixteen hour workshop presented to attendees preparing for ACE-CPT exam.

Exercise Etc. Fitness Conference, Boston MA, November 2005, Presented four - 2 hour workshops titled: "Core Training", "Plyometrics", "Exercise and the Shoulder", and "Medicine Ball Training".

Exercise Etc. Fitness Conference, Baltimore MD, September 2005, Presented four - 2 hour workshops titled: "Core Training", "Exercise and the Knee", "Exercise and the Shoulder", and "Medicine Ball Training".

National Strength and Conditioning Association, Certified Strength and Conditioning Coach 2 day symposium and workshop, Alexandria VA, September 2004. Sixteen hour workshop presented to attendees preparing for CSCS exam.

National Strength and Conditioning Association, Certified Strength and Conditioning Coach 2 day symposium and workshop, Boston MA, July 2004. Sixteen hour workshop presented to attendees preparing for CSCS exam.

MAPHERD Regional Conference, Worcester MA, March 2004. Total Sports Conditioning: Conducting group exercise for athletes. Presented to Physical Education Professionals. Co-presented by student – Jeffrey Jones.

NIRSA Region I Workshop Presentation. Providing community service through safe and effective strength programs for older adults. Waterville Valley, NH. December, 2002.

New England Chapter of the American College of Sports Medicine regional Conference. Is open or closed kinetic chain resistance training better for improving physical performance in older adults? Providence, RI, November 2002.

School Department, Milford, Connecticut. Inservice Workshop: “Operating a Fitness Facility in Public Schools”, presented to physical educators, November 1999.

University of Connecticut, School of Education. “Physical Activity and Health”, presented to graduate students in Education, June 1999.

Connecticut’s Alliance for Health, Physical Education, Recreation, and Dance. Regional Conference, “Connecticut’s Physical Fitness Assessment Program: Pilot Project”, November 1998.

Naugatuck, Southbury, & Ledyard, Connecticut. “Connecticut’s New Physical Fitness Assessment Protocol” workshop presented to Connecticut physical educators throughout the state, July 1998.

ACSM Health Fitness Instructor Workshop, University of Connecticut. “Applied Anatomy and Kinesiology”, June 1998.

ACSM Health Fitness Instructor Workshop, University of Connecticut, Laboratory Instructor, “Submaximal Bike Test Administration”, 1996 – 1997.

Connecticut’s Alliance for Health, Physical Education, Recreation, and Dance. Regional Conference, “Connecticut’s Physical Fitness Assessment Program Opinion Survey”, November 1997.

School Department, West Hartford, Connecticut. Inservice Presentation: “Physiologic Differences Between Children and Adults” & “Physical Activity for Children and Youth”, presented to physical educators, September 1997.

New England Regional Chapter of the American College of Sports Medicine Annual Conference, Free Communication presentation, “Connecticut’s Physical Fitness Assessment Program Opinion Survey”, October 1997.

School Department, Hamden, Connecticut. “Youth Resistance Training” & “Youth Fitness Assessment”, presented to physical educators, August 1997.

State Department of Corrections, Cheshire, Connecticut. “Applied Anatomy and Kinesiology”, “Progressive Resistance Training”, & “Programming for Special Populations”, presented to Dept. of Corrections Fitness Instructors, July 1997.

School Department, Newington, Connecticut. Inservice Presentation. “Physical Fitness Assessment in Connecticut: Six Year Review” & “Physical Fitness Assessment Pilot Project”, presented to physical educators, December 1996.

PUBLICATIONS

Godin, J. T. (2002). Effect of open- and closed kinetic chain resistance training on physical performance in older adults. Dissertation, University of Connecticut.

Chatterton, C. T., Camaione, D. N., Godin, J. T. (2001). Determinants of moderate-intensity physical

activity in a work-site population. Abstract submitted to American College of Sports Medicine, National Conference, May.

Schlicht J.S., Godin J.T., & Camaione D.N.. (1999). How to Help your Clients Stick with an Exercise Program: Building Self-efficacy to Promote Exercise Adherence. ACSM's Health & Fitness Journal, 3, #6, 27 - 31.

Camaione D.N., Godin J.T., Schlicht, J.S., & Chatterton C.T. (1997). Connecticut's New Fitness Test Process. CAHPERD The Bulletin, 43, 9 – 10.

Camaione D.N., Godin J.T., Schlicht, J.S., & Chatterton C.T. (1997). Connecticut's Physical Fitness Assessment Program. CAHPERD The Bulletin, 43, 11 - 13.

Godin J.T., Camaione D.N., & Chatterton C.T. (1997). Joints in Motion Marathon Training Manual, Southern New England Chapter of the Arthritis Foundation.

COMMUNITY SERVICE

Fitchburg State College, Faculty Seminar Series, "Open and Closed Kinetic Chain Resistance Training and Physical performance in Older Adults". February, 2006

Fitchburg State College, Leadership Conference, "Stress management", March 2006

Greenwich, Connecticut, Fire and Rescue – Conducted fitness assessment for fire and rescue candidates, June 2002.

Multi-service Center, Leominster, MA – Presentation to senior group: Exercise and Osteoporosis, May 2002.

Fitchburg State College, Leadership Conference – Presentation to students: Leadership through physical activity and wellness. April, 2002.

Fitchburg State College, Health Fair – Presentation to students, faculty, and staff: Weight loss and dietary supplements. April 2002

Fitchburg State College, Leadership Conference – Presentation to Students: Applying a Customer Service Frame of Mind in Your Everyday Life. April, 2003.

Fitchburg State College, Professional Development – Presentation to Student Affairs Division: Physical Activity and Health. December 2003.

SOAR Summer Advising 2002-2011

Fitchburg State College Health Fair, September 2003, 2004, 2005, 2010

Fitchburg State College Focus on Majors EXPO April 2004

Exercise and Older Adults Seminars

- March 2003, Fitchburg Senior Center
- January 2001, Fitchburg Senior Center
- February 2001, Fitchburg Green Community living Center
- June 2001, Friendship Club

PROFESSIONAL CONFERENCES

- American College of Sports Medicine (ACSM) National Conference, Denver, CO. June, 2011.
- National Strength and Conditioning Association (NSCA) National Conference, Atlanta, GA July 2007
- American College of Sports Medicine (ACSM) National Conference, New Orleans, LA June 2007
- American College of Sports Medicine (ACSM) National Conference, Denver, CO June 2006
- International Society for Sports Nutrition (ISSN) national Conference, Las Vegas, NV July 2006

- NEACSM Annual Spring Conference, Concord, MA, 1998, 1999, 2005, 2006
- NEACSM Annual Fall Conference, Providence, RI, 1995 – 2011
- ACSM National Conference, Orlando, FL, 1998
- FACT/IDEA Personal Trainers Conference, Poughkipsee, NJ, 1996
- NEHRSA Regional Conference, various locations, MA, 1992 - 1995
- Sports One Personal Trainers Conference, New York, NY, 1994

PROFESSIONAL MEMBERSHIPS

- American College of Sports Medicine (ACSM)
- National Strength and Conditioning Association (NSCA)
- New England Chapter of the American College of Sports Medicine (NEACSM)
- International Society for Sport Nutrition (ISSN)
- International Dance and Exercise Association for Health and Fitness Professionals (IDEA)
- American Medical Athletic Association (AMAA)
- USA Cycling
- USA Triathlon

PROFESSIONAL ORGANIZATION APPOINTMENTS

- New England Regional Chapter of the American College of Sports Medicine. Executive Committee, Chair of Development (May 2004 – May 2008). 4 year appointment
- National Strength and Conditioning Association, Special Interest Group, Ice Hockey, Executive Committee Member. 2007-present.
- Collegiate Strength and Conditioning Coaches Association. Written Certification Executive Board (September 2009 – present)

TIMOTHY HILLIARD

412 Village Street

Millis, MA

02054-1737

home: (508) 376-2891

cell: (508) 524-9960

e-mail: timhilliard@verizon.net

Exercise & Sport Sciences Department

155 North Street: Rm 108

Fitchburg State University

Fitchburg, MA 01420

Office: (978) 665-3671

thilliar@fitchburgstate.edu

Education

1995 **PhD**

Exercise Science

University of Massachusetts

Amherst, MA

1984 **BA**

Public Affairs/Journalism

Keene State College

Keene, NH

Teaching Experience

Associate Professor

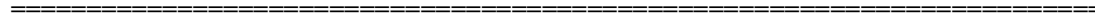
Department of Exercise & Sport Sciences
Fitchburg State University(September, 2005 -)

- ** Biomechanics of Sports (undergraduate)
- ** Cardiovascular & Electrophysiology (undergraduate)
- ** Functional Anatomy (undergraduate)
- ** Health & Fitness (undergraduate)
- ** Introduction to Exercise Science (undergraduate)
- ** Motor Learning & Control of Human Movement (undergraduate)
- ** Scientific Foundations of Strength Training & Conditioning (undergraduate)

Assistant Professor

Department of Physical Therapy
Northeastern University (September 1996 - 2004)

- ** Advanced Clinical Processes -- Motor Control (graduate)
- ** Research for Physical Therapists (undergraduate/graduate)
- ** Clinical Kinesiology (undergraduate)
- ** Pathokinesiology (undergraduate)



Lecturer

Department of Exercise & Sport Sciences

The University of Arizona (August, 1994 - July, 1996)

- ** Biomechanics of Human Motion (undergraduate/graduate)
- ** Neuromechanical Kinesiology (undergraduate/graduate)
- ** Scientific Methods and Professional Preparation (undergraduate)
- ** Functional Kinesiology (undergraduate)
- ** Introduction to Exercise Science (undergraduate)

Publications

Wilmarth, MA and Hilliard TS. Measuring Head Posture via the

Craniovertebral Angle. *Orthopaedic Physical Therapy Practice*. 14:1;
13-15. 2002

Judith D. Schaechter, Eduard Kraft, Timothy S. Hilliard, Thomas Benner,

Seth Finklestein, Bruce R. Rosen, Steven C. Cramer. Motor Recovery and Cortical Reorganization after
Constraint-Induced Movement Therapy in Stroke Patients: a Preliminary Study. *Neurorehabilitation and
Neural Repair*. 16:4; 326-338. 2002

Wilmarth, MA and TS Hilliard. Craniovertebral Angle Following Backpack Loading. *The*

Journal of Orthopaedic and Sports Physical Therapy. 32:1; A-40, January, 2002.

Garber, M, Aaron, R, Hilliard, T. Localized Impedance of Muscle: Effects of Resistance Training.

Physical Therapy. 81:5; A49. May, 2001

T.S. Hilliard and J.D. Schaechter. Improved Motor Function and Muscle Activation Following Constraint-Induced Movement Therapy.

33:5; suppl; May, 2001 *Medicine and Science in Sports and Exercise*.

Timothy S. Hilliard, Andrew M. Weiner, Jennifer L. Cann and Vincent P.

Simmarano. Age & Gender Differences in Lower Extremity Control Descending Stairs. *Research Quarterly for Exercise & Sport*. 72:1 suppl; March, 2001

Hilliard, Timothy S, and Maryann Wilmarth. Intrarater Reliability Of

A Hand Held Device Used To Measure Head Posture and Cervical Curvature. *Medicine and Science in Sports and Exercise*. 32:5 suppl; May 2000.

J.D. Schaechter, E. Kraft, T. Hilliard, B.R. Rosen and S.C. Cramer. Motor Recovery After Stroke Is Associated With Changes In Brain Activity Patterns.

Society of Neuroscience. 25:385; 1999

Kroll, Walter P., Jeffrey C. Ives, and Timothy S. Hilliard. Gender and Age Effects in Rapid

Movement Control. *Medicine and Science in Sports and Exercise*. 28:5 suppl; May 1996.

Hilliard, Timothy S., and Walter P. Kroll. Characteristics of Young and Elderly Females During

Rapid Limb Movement. *Medicine and Science in Sports and Exercise*. 28:5 suppl; May 1996.

Hilliard, Timothy S., and Walter P. Kroll. Retention of Rapid Movement Kinematic and

Electromyographic Practice Improvements in Young and Elderly Women. *Research Quarterly for Exercise & Sport*. 67:1 suppl; 1996

Hilliard, Timothy S., and Walter P. Kroll. EMG Power Spectrum Analysis During Fatiguing

Maximal Isometric Wrist Flexion Contractions. *Medicine and Science in Sports and Exercise*.

25:5 suppl; May 1993.

Hilliard, Timothy S., and Walter P. Kroll. EMG Power Spectrum Analysis Based on Initial Strength Level During Maximal Isometric Wrist Flexions. *Research Quarterly for Exercise & Sport*.

64:1 suppl; 1993

Presentations at International Conventions

A Pilot Study: Development Of A Model To Predict Localized Muscle Fatigue

During Hand-Intensive Work. Presented at *International Society of*

Biomechanics and Sport International Convention, Amherst, MA, July

1993

Presentations at National Conventions

Craniovertebral Angle Following Backpack Loading. Presented at *American Physical Therapy Association* Combined Sections Meeting, Boston, MA, February, 2002

Improved Motor Function And Muscle Activation Following Constraint-Induced Movement Therapy.

Presented at *The American College of Sports Medicine* National Convention, Baltimore, MD, May 2001

Age & Gender Differences in Lower Extremity Control Descending Stairs.

Presented at *American Alliance of Health, Physical Education,*

Recreation & Dance National Convention, Cincinnati, OH, March, 2001

Intrarater Reliability Of A Hand Held Device Used To Measure Head Posture and Cervical Curvature.

Presented at *The American College of Sports Medicine* National Convention, Indianapolis, IN, May 2000

Gender and Age Effects in Rapid Movement Control. Presented at *American College of Sports Medicine* National Convention, Cincinnati, OH, May 1996

Characteristics Of Young And Elderly Females During Rapid Limb Movement. Presented at *American College of Sports Medicine* National Convention, Cincinnati, OH, May 1996

Retention of Rapid Movement Kinematic and Electromyographic Practice Improvements in Young and Elderly Women. Presented at *American Alliance of Health, Physical Education, Recreation & Dance* National Convention, Atlanta, GA, March, 1996

EMG Power Spectrum Analysis During Fatiguing Maximal Isometric Wrist Flexion Contractions. Presented at *American College of Sports Medicine* National Convention, Seattle, WA, May 1993.

EMG Power Spectrum Analysis Based on Initial Strength Level During Maximal Isometric Wrist Flexions. Presented at *American Alliance of Health, Physical Education, Recreation & Dance* National Convention, Washington, DC, March, 1993.

Presentations at Regional Conventions

Hilliard, Timothy S. Strength & Skill: Nervous System Phenomena. Invited Presentation at York State convention of the *Alliance of Health, Physical Education, Recreation & Dance*. November, 1999

Grant Activity

External

- "Sway Testing" -- \$39,937
Submitted to The Medical Foundation, 2002

Status: *Funded* -- 9/2002-8/2003

Role: Research Analyst. Directed data collection and analysis. Wrote study design & statistical analysis sections of grant; Performed statistical analysis of results.

Contributed to estimates of project costs.

- "Changes in Head Posture & Muscle Activity Following Backpack Loading in Elementary School-Aged Children" -- \$5,000
Submitted to American Physical Therapy Association, 2000

Status: *Not Funded*

- "Gender and Age Effects on Neuromotor Control" -- \$337,984
Submitted to NIH, 1997

Status: *Not Funded*

Internal

- "Postural Sway: Effects of Age, Gender and Balance-Training" -- \$5,000
Submitted to Northeastern University Provost's Office, 2002

Status: *Not Funded*

- "Development of a Physical Therapy Motion Analysis Lab" -- \$3,300
Submitted to Northeastern University Provost's Office, 2001

Status: *Funded* -- 2001-2002

Role: Project Director. Developed a motion analysis lab currently being used for student projects as well as for curricular instruction, primarily utilizing existing equipment along with freeware.

- "Gender and Age Effects on Neuromotor Control" -- \$6,900
Submitted to Northeastern University Provost's Office, 1999

Status: *Not Funded*

Supervision of Graduate Student Projects

Jennifer Herlihy, Kate Mercer, Rachelle Parkinson, April Watson. Completed 6/03.

"Assessing the Effect of Athletic Participation on self-esteem in Young Women."

Chris San Augustin, Jon Raymond. Completed 6/03. The Relationship between Head Position and Carrying Loads in College-Aged Students."

Craig Vecchiarelli. Completed 6/03. "Strength, Power and Lower Extremity Muscle Activation in Older Adults."

Deborah Marcey, Dara Pristaw, Rita Uppal. Completed 6/03. "Head Posture as Measured by the Head Posture Spinal Curvature Instrument and by Video Analysis."

Lee Beasley, Nicole Boyko, Frank Giordano, Carrie Jose, Dan Kevorkian. Completed 6/02. "Effects of Sensory Deprivation in Conjunction with Balance Training on Postural Sway and Balance in Healthy Adults."

Yonna Bliner, Eric O'Neill, Bridget Promaulayko, Lauren Souler. Completed 6/02. "Age and Gender Differences in Strength, Power and Motor Control."

Melissa Bill, Erin Neary. Completed 6/02. "An Educational Session For High School Coaches and Physical Education Teachers on Proper Weight Training."

Sandra Garber. Completed 6/01. "Electromyographic Analysis of Closed Kinetic Chain Squats on Unstable Surfaces Utilized in Proprioceptive Training Performed by Healthy Young Adults."

Jason Rand. Completed 6/01. "Age and Gender Differences in Strength Gain and Fatigue Measured Via

Electromyography and Torque Activity During Lower Extremity Muscle Contractions."

Sean Hannigan, Andrew Morin. Completed 6/01. "The Effects of Exercise Across Age and Gender on Lower Extremity EMG Activity While Descending Stairs."

Marie Garber. Completed 6/00. "Localized Impedance Analysis: Effects of Resistance Training."

Jennifer Cann, Vincent Simmarano, Andrew Weiner. Completed 6/00. "Age and Gender Differences in Lower Extremity Control While Descending Stairs."

Anthony Percoco, Patrick Shafto. Completed 6/99. "The Dynamic Throwing Arm: Biomechanical Principles and Practical Application."

Bradley Burns. Completed 6/99. "A Comparison of Strength and Conditioning Protocols with Injury Rates in Ice Hockey Players."

Sherrie Ciardi, Veronica Gozzo. Completed 6/99. "Prevention of Low Back Pain in Pregnant Women Through Education."

Institutional Service

Exercise & Sport Sciences Department

EXSS Academic Standing Committee (2007-present)

EXSS Search Committee (2005-2007; 2008; 2010-present)

Friday's At Fitchburg (2008)

Honors Convocation (2006-present)

Human Subjects Committee (2005-2007)

Open House (2005-present)

Technology Advisory Committee (2009-present)

Winter Commencement (2006-present)

Physical Therapy Department (Northeastern)

Continuing Education Committee (2002)

Clinical Promotion Committee (2002)

PT Club Advisor (2002-2004)

Middler Year Class Advisor (2001-2004)

Search Committee. (1997-2002; Co-Chair 1999-2000)

Academic Standing Committee. (2000-2004)

Merit Review Committee. (1998-2000)

Open House Participant (1999-2004)

Neuromuscular Practice Pattern Team (1997-2004)

Bouve College of Health Sciences Service

Chair, Graduate Academic Standing Committee. (1999-2002)

Northeastern University Service

Faculty Marshall, Graduate Commencement (2001)

University of Arizona Service

Prehealth Professions Committee (1995; 1996)

Professional Service

Active Member In Professional Organizations

American College of Sports Medicine

Massachusetts State Track Coaches Association

National Strength & Conditioning Association

North American Society for Psychology of Sport and Physical Activity

USA Cycling

USA Track & Field Association

MONICA M. MALDARI

280 W. Acton Road

(978) 897-8922

Stow, MA 01775

mmaldari@yahoo.com

PROFESSIONAL EXPERIENCE:

Full-Time Day Instructor: **Spring 2011-Present**

Part-Time Day Instructor **Fall 2008-Fall 2011, Spring Terms 2005 & 2006**

Fitchburg State College

Fitchburg, Massachusetts

- Conduct the following exercise science courses: Exercise Response in Special Populations, Introduction to Exercise Science, and multiple sections of a general education course titled Health & Fitness.
- Provide academic advising for 30 assigned students.
- Oversee advisee internship experience.
- Design curriculum, assessment material and laboratory practicums.
- Engage students in active discussion to enhance learning process.

- Evaluate and critique labs, presentations and assignments.

Clinical Exercise Physiologist: 1/2001-Present

***Emerson Hospital
Massachusetts***

Concord,

- Provide risk factor intervention/management programming to patients in Phase II cardiac rehabilitation program with patient population diagnoses consisting of myocardial infarction, coronary artery bypass graft surgery, percutaneous transluminal angioplasty, stent, congestive heart failure, cardiomyopathy, and valve replacement/repair.
- Comorbidities of patient population include: diabetes, hypertension, obesity, hyperlipidemia, smoking & poor stress management skills.
- Direct warm-up and cool down, monitor EKG telemetry and blood pressure of exercising patients, and lead guided relaxation sessions.
- Clear patients for exercise, complete SOAP notes at end of session and participate in monthly clinical rounds assessing patient progress and needs.

Clinical Exercise Physiologist: 6/97-12/2000

***Brigham & Women's Hospital
Massachusetts***

Boston,

- Provided individualized education on dietary management, exercise training, stress management, & etiology of disease process to above patient populations (see Emerson Hospital) as well as transplant and pre-transplant with left ventricular assist device (LVAD) patients.
- Conducted initial evaluations, risk stratified patients and created an individualized plan of action based upon patient's medical history and exercise test results and Prochaska's Stage of Change Model.
- Directed warm-up/cool-down sessions, monitored EKG telemetry sessions & wrote weekly progress notes for assigned patients.
- Taught weekly education sessions on topics such as exercise, etiology of CAD, and risk factor management.
- Conducted maximal, submaximal, $\dot{V}O_2$, and nuclear exercise tolerance tests on inpatient and outpatient populations.
- Assisted in administrative duties of department, i.e., data entry, billing, and patient scheduling.

Consultant: 9/97-12/97

***CardioResponse
Massachusetts***

Natick,

- Developed the exercise programming section for a manual designed to educate patients after myocardial infarction, coronary artery bypass surgery or angioplasty.

Graduate Assistant: 5/96-5/97

University of Wisconsin Adult Fitness/Cardiac Rehabilitation Program

La Crosse, Wisconsin

- Independently performed $\dot{V}O_2$ Max exercise testing on undergraduate students entering the fitness major as well as on research study volunteers.
- Demonstrated laboratory techniques and supervised undergraduate anatomy and physiology classes.
- Monitored hemodynamic and ECG responses during graded exercise testing on cardiac and healthy populations.
- Prescribed exercise for indoor running/walking, weight training, water aerobics and swimming.

OTHER TEACHING EXPERIENCE:

Teacher: 8/94-12/94

Readak Educational Services Acton, Massachusetts

- Prepared and taught classes in study skills to students in grades 6-12 at various private schools in the U.S.
- Responsible for class recruitment, parent conferences, interaction with school administration, and weekly reports to home office.

Teaching Assistant: 9/93-5/94

University of Massachusetts Amherst, Massachusetts

- Conducted discussion sections of fifteen to twenty undergraduate students that corresponded to the Introduction to Exercise Science course.
- Curriculum included: introduction of exercise physiology and nutrition information not covered in lecture, supervising laboratory procedures and grading written essays.

RESEARCH EXPERIENCE 1991-1997

Human Performance Laboratory, Department of Exercise & Sport Science *La Crosse, Wisconsin*

Physiology Laboratory, Department of Exercise Science *Amherst, Massachusetts*

Biochemistry Laboratory, Department of Exercise Science *Amherst, Massachusetts*

Kinesiology Laboratory, Department of Exercise Science *Amherst, Massachusetts*

Experimental Psychology Laboratory, University of Sussex *Falmer, England*

- Assisted with data collection and analysis for a variety of research projects investigating muscle soreness, maximal aerobic capacity, physiological responses to various exercise modalities, body composition, gait analysis, and weight responses to drug intervention.

POSTER PRESENTATIONS/PUBLICATIONS:

A Comparison of the Physiological and Psychological Effects of Exercise on a Virtual Reality Recumbent vs. a Non-Virtual Reality Recumbent Cycle (graduate thesis)

National Convention of the American College of Sports Medicine, Denver, Colorado, May 1997

A Comparison of the Physiologic Responses to Self-selected Exercise Intensity on the Rowbike, Treadmill, and Bicycle. L. Naser, J.P. Porcari, M. Maldari, J. Zedaker

National Convention of the American College of Sports Medicine, Orlando, Florida, May 1998

“Virtual Motivation,” Porcari, J.P., Zedaker, J.M., Maldari, M.M., Fitness Management, December 1998

HONORS AND AWARDS:

Lui/Thomas Award

University of Wisconsin, La Crosse, 1997

Departmental Honors for Outstanding Academic Achievement University of Massachusetts, Amherst, 1994

PROFESSIONAL MEMBERSHIPS:

Massachusetts Association of Clinical Exercise Physiologists (MACEP), Founding Member

American College of Sports Medicine (ACSM)

Clinical Exercise Physiology Association (CEPA)

New England American College of Sports Medicine (NEACSM)

Massachusetts Association of Cardiovascular and Pulmonary Rehabilitation (MACVPR)

CERTIFICATIONS:

Registered Clinical Exercise Physiologist: American College of Sports Medicine

Certified Exercise Specialist: American College of Sports Medicine

Basic Cardiac Life Support (BCLS): American Heart Association

EDUCATION:

M.S. Clinical Exercise Physiology, December 1997

University of Wisconsin, La Crosse

B.S. Exercise Science (Psychology Minor), May 1994 cum laude University of Massachusetts, Amherst

Junior Year Abroad, 1991-1992

University of Sussex, England

Curriculum Vitae

David J. Rice

25 Neptune Rd.
Worcester, MA 01605
Phone: 413-531-4633
E-mail: drice9@fitchburgstate.edu

EDUCATION

- | | |
|------------------|---|
| <u>2006-2011</u> | University of Pittsburgh, Pittsburgh, PA
Department of Health & Physical Activity
Ph.D., Exercise Physiology
Collateral Area: Epidemiology |
| <u>2000-2004</u> | University of Massachusetts, Amherst, MA
<i>Master of Science</i>
Major: Exercise Science
Concentration: Exercise Physiology
GPA: 3.7 |
| <u>1998-2000</u> | University of Massachusetts, Amherst, MA
<i>Bachelor of Science, Cum Laude</i>
Major: Exercise Science
GPA: 3.4 |
| <u>1995-1998</u> | Holyoke Community College, Holyoke, MA
<i>Associate of Arts, High Honors</i>
Major: Arts and Science
GPA: 3.8 |

TEACHING EXPERIENCE

- | | |
|---------------------|--|
| <u>9/11-present</u> | Assistant Professor
Fitchburg State University, Fitchburg, MA
<i>Department of Exercise & Sports Science</i>
Courses taught: <ul style="list-style-type: none">· EXSS 1000: Health & Fitness· EXSS 1011: Introduction to Exercise Science· EXSS 2071: Exercise Physiology |
|---------------------|--|

1/08-5/08 Lecturer
University of Pittsburgh, Pittsburgh, PA
Department of Health and Physical Activity
Courses taught:
· HPA 007: Human Physiology

1/04-12/05 Lecturer
University of Massachusetts, Amherst, MA
Department of Exercise Science & School of Nursing
Courses taught:
· Exscsi 100: Introduction to Exercise Science
· Exscsi 205: Human Physiology
· Exscsi 300: Writing for Exercise Science
· Exscsi 340: Exercise Testing and Programming
· Nursing 301: Pathophysiology

9/01-5/04 Lecturer & Student Adviser
Holyoke Community College, Holyoke, MA
Department of Health, Fitness, and Nutrition
Courses taught:
· PER 120: Motor Learning Principles and Practices
· PER 130: Jogging and Running for Fitness
· PER 140: Beginning Golf
· PER 170: Exercise in Health and Disease
· PER 180: Physical Conditioning I
· PER 181: Physical Conditioning II
· PER 182: Physical Conditioning III
· PER 185: Principles of Strength and Conditioning

RESEARCH
EXPERIENCE

7/10-6/11 Data Manager
University of Pittsburgh, Pittsburgh, PA
Behavioral Medicine Research Group
Department of Psychology
Responsibilities:
· Developed and implemented data management and data analysis systems for two NIH-funded grants examining stress and behavioral influences on CVD risk
· Assisted with preparation of grant and journal article submissions

8/06-8/09 Research Assistant
 University of Pittsburgh, Pittsburgh, PA
Department of Health and Physical Activity
Responsibilities:

- Recruited participants
- Conducted participant interviews
- Conducted treadmill exercise tests
- Entered and analyzed data
- Prepared and delivered research presentations

**Research Articles
 in Preparation:**

Rice DJ, Pober DM, and Freedson PS. *Measuring Physical Activity in a Free-Living Environment.*

Rice DJ, Garcia JM, Aaron DJ, Robertson RL, and Nagle EL. *Correlates of Walking for Exercise in Young Adults.*

Rice DJ, Garcia JM, Aaron DJ, Robertson RL, and Nagle EL, and. *Differences in Psychosocial Factors According to Physical Activity Level in Males and Females.*

Garcia JM, **Rice DJ**, Robertson RL, Nagle EL, and Aaron DJ. *Association Between Physical Activity and Body Dissatisfaction in Young Adults.*

**Research
 Presentations**

5/2009 National Meeting of the American College of Sports Medicine in Seattle, WA.
“Differences in Psychosocial Factors According to Physical Activity Levels in Males and Females”.

5/2007 National Meeting of the American College of Sports Medicine in New Orleans, LA.
“Correlates of Walking for Exercise in a Young Adult Population”.

6/2004 National meeting of the American College of Sports Medicine in Indianapolis, IN.
"Measuring Physical Activity in a Free-Living Environment".

**EXTERNAL
FUNDING
RECIEVED**

5/2008

Received laboratory analysis services worth approximately \$6750 from the diaDexus company, following grant submission based on doctoral dissertation study design.

SERVICE

9/08-5/09

Health and Physical Activity department representative on the Council for Graduate Students in Education (CGSE) at the University of Pittsburgh.

**PROFFESIONAL
AFFILIATIONS**

Current member of the American College of Sports Medicine.

Jason Talanian Ph.D.

102 Oxford Street #2, Arlington, MA 02474
781-475-9185
exerphys@hotmail.com

Employer **Fitchburg State University** (2011-present)

Assistant Professor

- Currently teaching four classes a semester

Classes instructed: Human Motor Development
Health and Fitness
Exercise Testing and Prescription

Bacone College (2009-2011)

Assistant Professor, Exercise Science Coordinator & Faculty Athletic
Representative

- Currently teaching 4-5 classes a semester
- 2009-2010 Merit Award Winner – Awarded to top five faculty for ancillary service to the College and Community
- Advise students and supervise internships
- Maintain a fairly new curriculum that has only been offered for four years
- Faculty Athletic Representative (Compliance Officer)
- Vice-chair (active chair) for the Subcommittee on Institutional Change
- Faculty Advisor for the School of Education, Freshman Student Associations and Board Of Executives
- Member of the Student Affairs and Athletic Committee

Classes instructed: Exercise Physiology I & II
Kinesiology (Biomechanics)
NSCA Strength and Conditioning Certification Preparation
ACSM Personal Training Certification Preparation
Wellness and Fitness
Fitness Assessment
Administration of Exercise Testing and Prescription
Personal Health (online)
Foundations of Health, Education and Recreation (online)
Exercise Science Internship

Education **University of Guelph**

Ph.D. in Human Physiology (2008)

Advisor: Dr. Lawrence Spriet

Dissertation: Regulation of skeletal muscle fatty acid metabolism following acute and chronic exercise

Other research: Caffeine and cycling performance
Amino acid supplementation and exercise
Hydration regulation in professional and national level athletes
Supervised numerous student projects

Classes instructed: Regulation of Metabolism
Cardio-Respiratory Physiology
Work Physiology Lab
Applied Human Biology Lab
Human Physiology (TA)

Education **California State University Sacramento**

M.Sc. in Exercise Physiology (2003) & B.A. in Biological Science (2000)

Advisor: Dr. Roberto Quintana

Thesis: The effect of supra-maximal intensity interval training on fat oxidation rates, the crossover point and VO_2max .

Other duties: Internship for the Irvin Faria Human Performance Lab. Duties included exercise stress testing, body composition and respiratory analysis.

Classes instructed: Intermediate Jogging
Exercise Physiology Lab (TA)
Biomechanics Lab (TA)

Certifications

- ACSM Personal Training Certification
- NSCA CSCS Certification (Spring 2011)

Relevant Professional Work Experience

Applied Medical (2008-2009)

Territory Manager Associate

- Observed numerous surgeries in a support-role during open and laparoscopic operations

Canadian Centre for Ethics in Sports (2007-2008)

Doping Control Officer

- Regulated drug testing for national level athletes

Medtox (2003)

Exercise Physiologist

- Conducted numerous physical skills tests on Nevada Police and Sheriff to develop new standards for incoming officers

Schools Insurance Authority (2002-2003)

Employment Exercise Technician

- Provided medical evaluations and exercise tests for new-hires.

Coaching Highlights (1992-present)

- Ontario provincial championship silver and bronze medal (HS varsity)
- Two regional championships (HS varsity)
- State championship bronze medal (7th grade girls)
- Four league championships (HS varsity and middle school)
- Assistant coach for women's basketball at Eastern Nazarene College (NCAA)
- Cross country and track sectional team and individual medalist (HS varsity)
- Sports camp director and game official

Other Accomplishments and Awards

- Gatorade Sports Science Institute Student Research Award (2005)
- Numerous interviews for health and fitness magazines, newspapers and TV
- Student presentation award finalist (ACSM & State University competition)
- Department of Human Biology and Nutritional Sciences Entrance Scholarship (2004 & 2005)
- CSU-Sacramento Student Travel Awards (2002 & 2003)
- Joseph Farrell Memorial Scholarship (2002)
- Wellington Catholic School Board Volunteer Recognition Award (2008)
- National, regional and local scientific presentations
- Competitive triathlete/marathoner
- Cross country athlete for Sacramento City College (1991 & 1993)
- Athletic MVP (cross country)
- Varsity high school basketball, tennis and cross country
- Volunteer work (fund raising, coaching & event coordination)
- Martial arts (Ti Chi, Kung Fu & Tae Kwon Do)

Publications

9. **J.L. Talanian & L.L. Spriet. The effects of low doses of caffeine on performance and metabolism in elite cyclist. *in submission*.**
10. **J.L. Talanian, G.P. Holloway, L.A. Snook, G.J.F. Heigenhauser, A. Bonen & L.L. Spriet. Exercise Training increases sarcolemmal and mitochondrial fatty acid transport proteins in human skeletal muscle. *Am J Physiol Regul Integr Endocrinol Metab*. 2010, 299 (2), p. 180-188.**
11. J. Quadriatero, E. Bombardier, S.M. Norris, **J.L. Talanian**, M.S. Palmer, H.M. Logan, A.R. Tupling, G.J. Heigenhauser & L.L. Spriet. **Prolonged moderate-intensity aerobic exercise does not alter apoptotic signaling and DNA fragmentation in human skeletal muscle. *Am J Physiol Regul Integr Endocrinol Metab*. 2010, 298 (3), p. 534-547.**
12. S.D.R. Galloway, **J.L. Talanian**, A.K. Shoveller, G.J.F. Heigenhauser & L.L. Spriet. **Seven days of oral taurine supplementation does not increase**

- muscle taurine content or alter substrate metabolism during prolonged exercise in humans. *J Appl Physiol.* 2008, 105 (2), p. 643-651.**
13. L.L. Spriet, Christopher G.R. Perry & **J.L. Talanian. Legal pre-event nutritional supplements to assist energy metabolism. *Essays Biochem.* 2008, 44, p. 27-43.**
 14. **J.L. Talanian, S.D.R. Galloway, G.J.F. Heigenhauser, A. Bonen & L.L. Spriet. Two weeks of high-intensity aerobic interval training increases the capacity for fat oxidation in women. *J Appl Physiol.* 2007, 102 (4), p.1439-1447.**
 15. C.G.R. Perry, **J.L. Talanian, G.J.F. Heigenhauser & L.L. Spriet. The effects of training in hyperoxia vs normoxia on skeletal muscle enzyme activities and exercise performance. *J Appl Physiol.* 2007, 102 (3), 1022-1027.**
 16. **J.L. Talanian, R.J. Tunstall, M.J. Watt, M. Duong, C.G.R. Perry, G.R. Steinberg, B.E. Kemp, G.J.F. Heigenhauser & L.L. Spriet. Adrenergic regulation of HSL serine phosphorylation and activity in human skeletal muscle during the onset of exercise. *Am J Physiol Regul Integr Comp Physiol.* 2006. 291 (4), 1094-1099.**

Professional Affiliations

- American College of Sports Medicine (National & Central States Chapter)
- American Physiological Society

Michael B. Ward MS, CSCS, USAW, CISSN

263 Church St. Apt 5

Phone: 508-932-3652

Whitinsville, MA 01588

Email: mward17@fitchburgstate.edu

EDUCATION

MS Physical Education: Strength and Conditioning, Bridgewater State College, Bridgewater, MA. Graduated with 3.84 GPA, May 2007.

BA Psychology: Sport/Exercise/Health, UMass Dartmouth, North

Dartmouth, MA. Graduated Magna Cum Laude with University Honors and

Commonwealth Scholar status, May 2005.

WORK HISTORY

Fitchburg State University, Department of Exercise & Sports Science,

Fitchburg, MA

Full Time Instructor, Fall 2011-

- Taught EXSS 1000 – Health and Fitness.
- Taught EXSS 2300 – Nutrition in Sport and Exercise.
- Performed academic advising duties for 30 EXSS majors.

Part-time Instructor, Fall 2008 – Spring 2010

- Taught EXSS 1000 – Health and Fitness.
- Taught EXSS 3120 – Scientific Foundations of Strength & Conditioning.

Bridgewater State College, Department of Movement Arts Health

Promotion and Leisure Studies, Bridgewater, MA

Adjunct Instructor, Spring 2008 to Spring 2009

- Taught PHED 204 – Theory and Practice of Progressive Resistance Training; part of Strength and Conditioning core curriculum.
- Taught PHED 523 – Strength and Conditioning Lab; Advised Graduate S & C students as part of Strength and Conditioning Lab requirement.

- Coached, instructed and evaluated exercise science students for dynamic warm ups, progressive plyometric exercises, agility drills, powerlifting with assistant exercises, Olympic lifting, and flexibility training.

Strength & Conditioning Graduate Assistant, 2005 –2007

- Teaching assistant for strength and conditioning core curriculum classes.
- Coached, instructed and evaluated exercise science students for dynamic warm ups, progressive plyometric exercises, agility drills, powerlifting with assistant exercises, Olympic lifting, and flexibility training.
- Presented to high school Physical Education staff for professional development seminar.
- Worked as assistant in the Exercise Physiology lab conducting various exercise tests including max VO₂, hydrostatic weighing, exercise stress testing, and body composition testing with calipers.
- Digitized data on Olympic lifts using Peak Motus software as Research Assistant.

College of the Holy Cross, Department of Athletics, Worcester, MA

Strength and Conditioning Intern Coach, January 2007 – November 2007.

- Coached & instructed NCAA Division I varsity athletes through workouts including warm ups, plyometrics, speed & agility training, flexibility training, and weight training exercises for off-season football, preseason golf & crew and in-season hockey.
- Created two 12 week preseason football strength & conditioning programs for linemen & for backs and receivers.

Personal Trainer, Spring 2008

- Designed strength training programs for Holy Cross students.
- Coached and led students through workouts including dynamic warmup, free weight strength training exercises, core strengthening exercises and flexibility training.

Worcester Fitness/St. Vincent Hospital, Worcester, MA

Personal Trainer, August 2006- present

- Created & implemented strength training & conditioning programs for clients including special populations.
- Conducted laboratory tests such as blood pressure, flexibility tests, body composition tests, and maximal VO₂ tests using the Microfit system.
- Implemented workshops at various NSTAR locations giving demonstrations & selling equipment for home fitness.
- Worked health fairs conducting lab tests such as blood pressure, skin cancer screening, spirometry, body composition, strength and flexibility assessments.
- Created & instructed West African Dance performance class.
- Performed regular health club maintenance procedures.

HONORS, CERTIFICATES, and ACTIVITIES

- NSCA Certified Strength and Conditioning Specialist (CSCS)
- ISSN Certified Sports Nutritionist (CISSN)
- USA Weightlifting and NSCA member
- USA Weightlifting Certified Club Coach (USAW)
- USA Weightlifting New England LWC certified referee
- Team Bridgewater Weightlifting, Vice President 2006-2007
- 2007 USA Weightlifting Collegiate National Championships 8th place finisher, 77kg class
- 2006 & 2007 USA Weightlifting New England LWC Champion, 77kg weight class
- BLS (CPR and AED) certified through American Heart Association
- Massachusetts Commonwealth Scholar 2005
- UMass Dartmouth Psychology Department Honors Program
- Psi Chi National Honor Society member since 2003
- UMass Dartmouth Honors Thesis Award 2005
- Profiled in *Who's Who in American Colleges and Universities 2005*
- Psi Chi Undergraduate Research Conference 2005, Poster Presentation 2nd place
- COMPEER Experiential Learning Program 2002-2004
- Kekeli African Drumming & Dance Ensemble Lead Dancer 2003-present
- UMass Dartmouth Javanese Gamelan Ensemble member 2004-2005
- Millbury High School graduate with Honors 2001

Danielle M. Wigmore, Ph.D.

19 Holt Street North Chelmsford, MA · (978) 407 3600 · email: dwigmor1@fitchburgstate.edu

Education

University of Massachusetts, Amherst, Ph.D. Exercise Science, 2006

University of Massachusetts, Amherst, M.S., Exercise Science, 2003

Skidmore College, Saratoga Springs, NY, B.S., Physical Education, 1998

HONORS AND AWARDS

Trainee Travel Stipend Award, *Workshop on Investigation of Human Muscle Function in Vivo*, 2005

Predoctoral Fellowship, *American Heart Association*, 2005

NASA Space Physiology Research Grant, *ACSM Foundation*, 2005

Phi Kappa Phi Honor Society, 2005

Graduate Student Travel Grant, *University of Massachusetts*, 2002, 2003, 2004, 2006

Mark Connolly Memorial Masters Scholarship Award, *American College of Sports Medicine*, November 2002

James Z. Naurison Scholarship, *Community Foundation of Western Massachusetts*, 2002-2003

Third place winner, School of Public Health and Health Sciences Annual Poster Session,

University of Massachusetts, April 2002

Academic Achievement Award, School of Public Health and Health Sciences, *University of Massachusetts*, September 2001

Periclean Honor Society, *Skidmore College*, Saratoga Springs, NY, 1996-1998

TEACHING EXPERIENCE

Assistant Professor, *Exercise and Sport Science*, *Fitchburg State University*, September 2006-present

- Teach a variety of courses in the Exercise and Sport Science major

- Teach a service course in Health and Fitness for the college, designed and implemented online version of this course
- Advise students in the Exercise and Sport Science major
- Supervise student internships
- Oversee departmental curriculum assessment, including leading faculty in discussions on assessment, organizing the assessment plans and schedules, overseeing analysis of our outcome measures, and reporting on those outcome measures
- Advise students in research project for independent study

Instructor, *Human Physiology, University of Massachusetts*, summer 2003, summer 2005

- Prepare and organize all class material
- Give lectures related to various topics in human physiology
- Write, administer and grade homework assignments, quizzes and exams

Teaching Assistant, *Junior Writing Seminar, University of Massachusetts*, spring 2003

- Lead students in class discussion and peer-feedback
- Assist students in developing and improving writing skills
- Grade writing assignments

Teaching Assistant, *Human Physiology, University of Massachusetts*, 2001-2002

- Assist students in the study of human physiology
- Assist professor in preparation for class
- Organize and run review sessions
- Grade homework assignments and exams
- Guest lecture

Teaching Assistant, *Human Anatomy and Physiology Laboratory, Skidmore College*, 1995-1998

- Instructed students in study of human anatomy
- Prepared and administered lab practicals
- Organized, prepared and supervised lab activities
- course, with much success.

RESEARCH EXPERIENCE

Research Assistant, Muscle Physiology Laboratory, *University of Massachusetts*, Amherst, September 2000-2006

- Organize subject recruitment efforts

- Oversee human subjects requirements and applications for all studies in the laboratory
- Collect and analyze data for a variety of studies in the laboratory
- Write and submit manuscripts for publication
- Build and maintain equipment for studies
- Supervise undergraduate students participating in independent study and thesis projects
- Mentor junior members of the laboratory with regard to study design, synthesis of the literature, presentation and writing skills

Doctoral Dissertation Research, collaboration with investigators at *Yale University School of Medicine*, May 2005-August 2006

The role of intracellular oxygenation in age-related differences in skeletal muscle fatigue.

- Collect, process and analyze data for studies on muscle fatigue, oxygenation and aging
- Run spectrometer for magnetic resonance spectroscopy experiments
- Recruit volunteers for study
- Present preliminary data from study
- Publish results in peer-reviewed journal upon completion of study

Master's Thesis Research, collaboration with investigators at *Yale University School of Medicine*, March 2001-January 2003

Magnetic resonance imaging measures of muscle perfusion and the role of contraction intensity in the occlusion of perfusion.

- Collected and analyzed data for studies on muscle function, aging and blood flow
- Built and maintained equipment for studies
- Recruited volunteers for studies
- Defended and passed thesis in January 2003

Research Assistant, Clinical Muscle Soreness Study, *University of Massachusetts*, Amherst, October –December, 2000

- The purpose of this study was to investigate the effect of a topical analgesic on muscle soreness following strenuous exercise
- Evaluated muscle soreness over a 12 hour period using visual analogue and categorical scales

Principal Investigator, Hyperbaric Study, *Human Performance Laboratory, Skidmore College*, fall 1997

The effect of hyperbaria on intense intermittent anaerobic exercise in college age women

- Performed subject recruitment and exercise testing as well as data entry and analysis
- Presented results at Senior Thesis forum

Research Assistant/Laboratory Technician, Human Performance Laboratory, Skidmore College, 1995-1998

- Administered various exercise tests (VO₂max, WAT, various submaximal protocols, and body composition)
- Maintained Human Performance Laboratory in organized, working condition
- Conducted literature searches using library databases and the Internet

Collaborator, student-faculty research project, *Skidmore College*, summer 1996

The physiological effects of caffeine ingestion on African Americans

- Performed subject recruitment, exercise testing (heart rate, blood pressure, resting metabolic rate) and data analysis

Collaborator, student research project, *Skidmore College*, fall 1995

Comparison of submaximal cycling exercise in hyperbaric and normobaric conditions

- Assisted in data collection and analysis
- Presented a poster at the annual meeting of the Mid-Atlantic Regional Chapter of ACSM

Research Assistant, independent study, physical education, *Skidmore College*, spring 1995

- Assisted in testing and data analysis for a study examining the validity of the caltrac and tritrac accelerometers

WORK EXPERIENCE

Fitness Consultant, *University of Massachusetts Police Department*, Amherst, MA, winter 2001

- Ran program on principles of exercise training for new recruits
- Devised exercise routine for new recruits

Exercise Physiologist and Group Fitness Director, *Fitcorp*, Waltham, MA, Billerica, MA, January 1999-July 2000

- Performed fitness evaluations and consultations (cardiovascular fitness, body composition, flexibility, goal assessment)
- Devised personalized workouts for members, tailored to their individual goals
- Organized all group fitness activities and conducted group fitness classes

- Organized and executed corporate wellness events and ran incentive games to increase utilization

Personal Trainer, *World Gym*, Saratoga Springs, NY, January-August 1998

- Trained several handicapped members, notable progress observed
- Created individualized exercise programs for members
- Instructed members on proper machine use and exercise techniques

Fitness evaluator/aerobics instructor, Skidmore Employee Lifetime Fitness Program, *Skidmore College*, 1996-1997

- Instructed faculty aerobics class
- Performed fitness evaluations (body composition, flexibility, hand grip strength) at health fairs

PUBLICATIONS

D.M. Wigmore, B. Fernhall, D.L. Smith. Cardiovascular responses to acute aerobic exercise. In: *Advanced cardiovascular exercise physiology* (pp.139-162). Champaign, IL: Human Kinetics, 2011.

D.M. Wigmore, B. Fernhall, D.L. Smith. Cardiovascular adaptations to aerobic training. In: *Advanced cardiovascular exercise physiology* (pp.163-1178). Champaign, IL: Human Kinetics, 2011.

D.M. Wigmore, D.E. Befroy, I.R. Lanza, J.A. Kent-Braun. Contraction frequency modulates muscle fatigue and the rate of myoglobin desaturation during incremental contractions in humans. *Appl Phys Nutr Metab* 33(5): 915-921, 2008.

D.W. Russ, T.F. Towse, **D.M. Wigmore**, I.R. Lanza, J.A. Kent-Braun. Contrasting influences of age and sex on muscle fatigue. *Med Sci Sport Ex.* 40(2): 234-241, 2008.

I.R. Lanza, **D.M. Wigmore**, D.E. Befroy, J.A. Kent-Braun. In vivo ATP production during free-flow and ischaemic muscle contractions in humans. *J Physiol* 577 (Pt1): 353-367, 2006.

D.M. Wigmore, K. Propert, J.A. Kent-Braun. Blood flow does not limit skeletal muscle force production during incremental isometric contractions. *Eur J Appl Phys* 96(4): 370-378, 2006.

- Kent-Braun JA, BM Damon, **DM Wigmore**, DM Pober. BOLD indirect versus ASL direct measurement of muscle perfusion: a reply [letter]. *J Appl Physiol* 99(1): 376-377, 2005
- D.M. Wigmore**, B.M. Damon, D.M. Pober, J.A. Kent-Braun. MRI measures of perfusion-related changes in human skeletal muscle during progressive contractions. *J Appl Physiol* 97(6): 2385-2394, 2004
- Damon, B.M., **D. Wigmore**, Z. Ding, J.C. Gore, J.A. Kent-Braun. Cluster analysis of muscle functional MRI data. *J Appl Physiol* 95(3): 1287-1296, 2003.
- Lanza, I.R., G.E. Caldwell, T.F. Towse, **D.M. Wigmore**, J.A. Kent-Braun, FACSM. Effects of age on human muscle torque, velocity and power in two muscle groups. *J Appl Physiol*, 95(6): 2361-2369, 2003
- Bartholomew, D.M.**, B.M. Damon, J.C. Gore, J.A. Kent-Braun. Comparable post-exercise muscle hyperemia measured by MRI and plethysmography. *Med. Sci. Sports Exerc.* 35(5): S388, 2003 [abstract]
- DW Russ, **DM Bartholomew**, TF Towse, and JA Kent-Braun, FACSM. Influence of duty cycle on sex differences in fatigue during maximum-effort exercise. *MSSE* 35(5): s145, 2003 [abstract]
- Sakkas, G., J. Kent-Braun, K. Mulligan, J. Doyle, M. Knudsen, I. Lanza, **D. Bartholomew**, M. DaSilva, T. Schleich, M. Schamben. Muscle specific strength, Intramuscular energy metabolism, and other indices of mitochondrial function are not altered in HIV-infected patients with marked peripheral lipoatrophy. [abstract to International Society of Magnetic Resonance in Medicine—Toronto, Canada, 2003]
- Towse, T.F., P. Sacco, D. Russ, **D.M. Bartholomew**, JA Kent-Braun, FACSM. Fatigue and central activation failure in young and older adults. [abstract] Presented at Experimental Biology--New Orleans, LA, April 2002
- Kent-Braun, J.A. FACSM, A.V. Ng, FACSM, J. Doyle, F. Beaudoin, **D. Bartholomew**. Gender, but not age, affects relative fatigue during sustained maximal voluntary isometric contractions. *Med. Sci. Sports Exerc.* 33(5): S262, 2001 [abstract]

PROFESSIONAL PRESENTATIONS

- “Describing the cycle of assessment and program improvement in an assessment report”, Fitchburg State University Assessment Day—Fitchburg, MA, January 2012. (Slide Presentation)**
- “Using internships for assessment”, Fitchburg State College Assessment Day—Fitchburg, MA, January 2010. (Slide Presentation)**
- “Assessment efforts: EXSS department”, Fitchburg State College Assessment Day—Fitchburg, MA, May 2008. (Slide Presentation)**
- “Role of cellular oxygen in age-related differences in muscle fatigue during incremental contractions”, American College of Sports Medicine annual conference--New Orleans, LA, June 2007. (Slide Presentation)**
- “In vivo assessment of intracellular oxygenation during fatiguing isometric contractions of the ankle dorsiflexors”, American College of Sports Medicine annual conference--Denver, CO, June 2006. (Poster Presentation).**
- “Skeletal muscle perfusion and oxygenation: Impact of contraction intensity and age”, Seminar, University of New Hampshire--Durham, NH, February 2006. (Slide Presentation)
- “Skeletal muscle perfusion and oxygenation: effects of contraction intensity”, New England Regional Chapter of the American College of Sports Medicine annual conference—Providence, RI, November 2005. (Invited presentation)
- “Skeletal muscle fatigue is related to a mismatch between oxygen delivery and usage”, Workshop on Investigation of Human Muscle Function *in Vivo*—Nashville, TN, October 2005. (Poster Presentation)
- “In vivo muscle intracellular oxygenation by MR spectroscopy: effect of age”, Graduate Seminar, University of Massachusetts--Amherst, MA, May 2005. (Slide Presentation)**
- “Perfusion of human skeletal muscle: new applications of fMRI”, MRS of Skeletal Muscle Seminar, Yale University Magnetic Resonance Research Center--New Haven, CT, February 2005. (Slide Presentation)
- “Does blood flow limit force production during incremental isometric contractions?”, Integrative Biology of Exercise APS Intersociety Meeting--Austin, TX, October 2004. (Poster Presentation)
- “Perfusion of human skeletal muscle: utility of fMRI”, Graduate Seminar, University of Massachusetts--Amherst, MA, March 2004. (Slide Presentation)**
- “Comparable post-exercise muscle hyperemia measured by MRI and plethysmography”, American College of Sports Medicine annual conference--San Francisco, CA, June 2003. (Poster Presentation)
- “Comparable post-exercise muscle hyperemia measured by MRI and plethysmography”, School of Public Health Annual Poster Session, University of Massachusetts--Amherst, MA, April 2003. (Poster Presentation)
- “MRI measures of muscle perfusion and the role of contraction intensity”, American College of Sports Medicine annual conference--St. Louis, MO, June 2002. (Poster Presentation)

"MRI measures of muscle perfusion and the role of contraction intensity", School of Public Health Annual Poster Session, University of Massachusetts-- Amherst, MA, April 2002. (Poster Presentation)

"Gender, but not age, affects relative fatigue during sustained maximal voluntary isometric contractions" American College of Sports Medicine annual conference--Baltimore, Maryland, June 2001. (Poster Presentation)

"The effect of hyperbaria on intense intermittent anaerobic exercise in college age women" Mid Atlantic Regional Chapter of the American College of Sports Medicine annual conference--Penn State, November 1997. (Slide presentation)

"Comparison of submaximal cycling exercise in hyperbaric and normobaric conditions" Mid Atlantic Regional Chapter of the American College of Sports Medicine annual conference--Baltimore, Maryland, November 1995. (Poster Presentation)

PROFESSIONAL ORGANIZATIONS

American College of Sports Medicine, since 2001

New England Chapter of American College of Sports Medicine, since 2000

American Physiological Society, since 2000

International Society for Magnetic Resonance in Medicine, 2003

SERVICE

Co-chair, Exercise and Sports Science Search Committee, Fitchburg State University, AY2011-2012

Mentor, New Faculty Mentor Program, Fitchburg State University, AY2011-2012

Member, Ruth Butler Grant Committee, Fitchburg State University, AY2011-2012

Member, All College Committee, Curriculum subcommittee, Fitchburg State University AY2009-2010, AY2010-2011

Member, Leadership Academy Curriculum Committee, Fitchburg State College AY2010-2011

Chair, Fitchburg State College Human Subjects Committee, AY2009-2010

Member, EXSS Academic Standing Appeals Committee, since 2010

Member, Exercise and Sport Science Search Committee, Fitchburg State College AY2007-2008, AY2010-2011

Member, Fitchburg State College Human Subjects Committee, AY2006-2007 to AY2009-2010

Secretary, Student Affairs Committee, Fitchburg State College, AY2007-2008

Student Representative, New England chapter of the American College of Sports Medicine, January 2004- December 2005.

Member, Program Committee for the 2004 annual fall meeting of the New England chapter of the American College of Sports Medicine.

SECTION 3: CURRICULUM

In this section, the following are discussed: The Mission of the Exercise and Sports Science Department; the Exercise and Sports Science Department's program objectives; a description of the Exercise and Sports Science curriculum, including the two concentrations in the major; a description of how courses relate to the program objectives, including samples of student products; curriculum trends in Exercise Science; the Exercise and Sports Science Department's outcomes assessment plan; and the effectiveness of the Exercise and Sports Science curriculum.

Mission of the Exercise and Sport Science Department

The Exercise and Sports Science Department's mission is to offer a high-quality, student-centered, academically rigorous education in the major of Exercise and Sports Science, to support collaborative majors with other departments, and to continue to offer quality courses fulfilling the liberal arts and sciences requirement as well as providing opportunity for enjoyable structured activities to students across campus, fostering healthy and physically active lifestyles.

Exercise and Sport Science Program Objectives

- To provide relevant professional education supported by a rigorous scientific base to students who choose Exercise and Sport Science careers, either in the clinical or the fitness setting.
- To provide leadership opportunities through apprenticeships, specified internships, and presentations and publications.
- To provide career alternatives to students in other majors by offering courses related to their chosen fields of endeavor.
- To support the college's liberal arts requirement in the area of health and fitness.

Exercise and Sport Science Major

Prior to beginning work on the curriculum, experts in the field of exercise science, clinical physiology, and fitness management were consulted regarding the knowledge and skills expected of graduates in an Exercise and Sports Science major with tracks in Clinical Physiology and Fitness Management. In addition, publications of standards from the American College of Sports Medicine and the National Strength and Conditioning Association were studied for expected competencies. The curriculum that follows reflects what was learned in these endeavors. Graduates from this major will have both the knowledge base and the practical skills need to be competent practitioners, and/or to further their education in a graduate program.

The Exercise and Sports Science major is, in itself, multidisciplinary. It is the integration of anatomy, physiology, physics, mechanics, psychology, and learning theory to describe and explain responses and adaptations to exercise and training, and to apply that knowledge to enhance physical potential for health, for sport, and in rehabilitation. Additionally, the major is interdisciplinary, drawing from Biology, Psychology, and/or Business Administration to provide a foundation in these disciplines to support exercise science applications as well as to enhance career preparedness.

There is currently no licensure for health/fitness professionals; licensure for Clinical Exercise Physiologist is still in the early stages, and Massachusetts Association of Clinical Exercise Physiologists has submitted a licensure bill to the legislature during the 2011-2012 legislative session. The American College of Sports Medicine and the National Strength and Conditioning Association do offer certification programs in health and fitness and in clinical exercise physiology, which have become the industry standard. Therefore, the curriculum was based, in large part, on the knowledge, skills, and abilities set as standards by these two organizations. These are:

Health/Fitness Management

Functional Anatomy and Biomechanics
Exercise Physiology
Human Development and Aging
Pathophysiology/Risk Factors
Human Behavior/Psychology
Health Appraisal/Exercise Testing
Emergency Procedures and Safety
Exercise Programming
Nutrition and Weight Management
Program Administration/Management
 Personnel
 Budget/finance
 Marketing/sales
 Operations
 Communication
 Health promotion
Interpersonal Skills

Clinical Exercise Physiology

Metabolic Function
Pathophysiology/Risk Factors
Health Appraisal/Exercise Testing
Emergency Procedures and Safety
Exercise Programming
Electrophysiology
Interpersonal Skills

In preparation of this curriculum, prerequisites were adopted to enhance continuity, building on knowledge previously attained. Research methods, technological skills, skill in reading the literature, and scientific writing are emphasized throughout the curriculum. The concept of progressive rigor is also applied, and this is reflected in the numbering system. This is outlined as follows:

- Courses numbered 1000-1099 are introductory courses or survey courses, and are intended primarily for first and second year students.
- Courses numbered 2000-2099 are secondary level courses requiring a foundation of previous knowledge, and emphasizing application; usually not open to first year students.
- Courses numbered 3000-4099 are advanced courses, seminars, internships and independent studies emphasizing higher level thinking and writing; usually not open to first and second year students.

The first year student will complete a limited number of core Exercise and Sports Science courses because the first year is considered a foundation year. There is a common core of Exercise Science courses for both tracks, to ensure a solid foundation in the various disciplines that comprise this multidisciplinary field of study, and to ensure the ability to apply knowledge in a variety of practical experiences. Prerequisites in Biology provide an adequate foundation of knowledge prior to taking courses in Exercise and Sports Science, and a minor in Business Administration is required for those students electing the Fitness Management Track to ensure career preparedness. There is an opportunity also to develop breadth and depth in the field of Exercise and Sport Science as each track has specific requirements, and the opportunity for students to explore other disciplines through judicious use of free electives. The courses that are required or taken as electives by the student focus on the standards stated above.

Exercise and Sport Science Major Requirements

In addition to Exercise and Sports Science courses, the major requires Anatomy and Physiology I and II, Chemistry for Health Sciences (or General Chemistry I for students planning to pursue graduate study in physical therapy), and General Psychology. In addition, General Biology I and II are required for the Clinical Exercise Physiology Track.

Common Core (45 credit hours)

Introduction to Exercise Science (3 c/h)
Functional Anatomy (3 c/h)
Exercise Physiology I (4 c/h)
Exercise Physiology II (4c/h)
Human Motor Development (3)
Motor Learning and Control of Human Movement (3 c/h)
Biomechanics of Sport (3 c/h)
Exercise Testing and Prescription (4 c/h)
Nutrition in Exercise and Sport (3 c/h)
Scientific Foundations of Strength Training and Conditioning (3 c/h)
Fitness Management (3)
Senior Seminar (3 c/h)
Internship/Apprenticeship (6 c/h)

Track Requirements:

Clinical Exercise Physiology (6 c/h)

Cardiovascular Physiology and
Electrophysiology
Exercise Response and Adaptations
in special Populations

Fitness Management Track (3 c/h)

Health Promotion

Total credits in the major: 51 hours

Total credits in the major: 48

In addition to the required course in Exercise and Sports Science, students in the Fitness Management Track are required to take the following cluster of business courses: Principles of Management, Fundamentals of Marketing, Managerial Accounting, Microeconomics (counts in LA&S), Financial Reporting, Business Law, and CIS for Business.

The Exercise and Sports Science department is dedicated to delivering a well-rounded curriculum that prepares students for careers in Exercise Science or graduate programs in related fields. It also recognizes the importance of accreditation and plans to seek accreditation for our program in the next five years. The curriculum has also been reviewed to determine which courses are no longer being taught. These interests have led us to make the following important changes to our curriculum.

- Expand Introduction to Exercise Science from a 1 credit course to a 3 credit course
- Expand the one semester Exercise Physiology course to a 2 semester sequence (Exercise Physiology I and II)
- Remove Exercise Metabolism as a requirement of the major
- Require Human Motor Development and Fitness Management as core requirements (previously Human Motor Development was required only for the Clinical Exercise Physiology track and Fitness Management only for the Fitness Management track).
- Remove two psychology courses as requirements of the major.
- Remove the following 1 credit courses from the course offerings:
 - LEAD 1140 Leadership in the Outdoors
 - EXSS 1020 Volleyball
 - EXSS 1040 Tennis
 - EXSS 1050 Advanced Tennis
 - EXSS 1070 Karate
 - EXSS 1080 Judo
 - EXSS 1120 Aerobics
 - EXSS 1130 Dance Aerobics
 - EXSS 1150 Canoeing
 - EXSS 1190 Downhill Skiing
 - EXSS 1200 Cross Country Skiing
 - EXSS 1210 Modern Dance I ○
 - EXSS 1220 Modern Dance II ○
 - EXSS 1230 Modern Dance III

- EXSS 1240 Yoga
- EXSS 1250 Bicycle Touring
- EXSS 1310 African Dance
- EXSS 1410 Beginning Swimming
- EXSS 1420 Intermediate Swimming
- EXSS 1430 Introduction to Water Aerobics
- EXSS 4020 Camp Counseling
- EXSS 4030 Physical Education, Fitness and Sport: An Overview
- EXSS 4050 Art of Dance
- EXSS 4080 Physical Education in the Elementary School
- EXSS 4100 Movement Education
- EXSS 4130 Making Dances: Choreography and Composition

Teaching the introductory course as a 3 credit course has given us more time to provide students with a framework of the Exercise and Sports Science major, including the many academic areas that comprise exercise science and the requirements of the program. Students are better prepared for courses in the major following this course. Expansion of the Exercise Physiology course to two semesters has been instrumental in allowing faculty time to adequately address the many important concepts covered in this class. Further, there is more opportunity to discuss application of core concepts to more practical situations, such as various types of exercise training, environmental conditions, age and gender differences in physiological responses and application to disease. These curricular changes have also allowed us ensure that all of the KSAs required for accreditation in Exercise Science are being taught in the core curriculum, where before certain KSAs were only being addressed in courses in one track.

Electives: A number of elective courses are available to students wishing in depth study of a particular area. These include Apprenticeship, Adaptations in Extreme Conditions, Psychology of Sport, and Outdoor Education. Students in the Fitness Management Track may elect to take Cardiovascular and Electrophysiology or Exercise Response and Adaptation in Special Populations, while students in the Clinical Exercise Physiology Track may elect to take Health Promotion.

Suggested four-year plans of study for both tracks can be found at the end of this section along with the two year course rotation.

The Exercise and Sports Science Department's mission is to offer a high-quality, student-centered, academically rigorous education in the major of Exercise and Sports Science, to support collaborative majors with other departments, and to continue to offer quality courses fulfilling the liberal arts and sciences requirement as well as providing opportunity for enjoyable structured activities to students across campus, fostering healthy and physically active lifestyles.

The Fitness Management and Clinical Exercise Physiology concentrations reflect the core tenets of the Exercise and Sports Science Department's vision and mission. Both concentrations base their coursework in the rigorous multidisciplinary fields of anatomy, physiology, physics, psychology, chemistry and learning theory. The addition of a new and expanded lab space and upgraded equipment

will enhance the students' experience and understanding of physiology. The concentrations are interdisciplinary in that they draw from biology and business administration to provide a foundation to support exercise science applications as well as to enhance career preparedness. Both concentrations culminate in an internship experience whereby students obtain real-world experience in a field of their choice.

The Clinical Exercise Physiology curriculum reflects the Exercise and Sports Science Department's vision for rigorous academics that will provide students with a top-notch, competitive degree in clinical exercise physiology. The concentration in Clinical Exercise Physiology builds upon the core exercise and sports science courses mentioned above by offering advanced courses in cardiovascular physiology/electrophysiology and applications of exercise in clinical populations. The addition of these specific courses enhances students' knowledge in the clinical aspect of exercise science and prepares them for a career in the healthcare industry or graduate studies in the allied health fields. The culmination of studies in a clinical internship allows students to experience first-hand how the concepts learned in the Exercise and Sports Science major are applied in the field. The rigorous coursework and practical experience via internships position students to obtain professional certification or pursue graduate studies.

In addition to the core Exercise and Sports Science courses, the Fitness Management concentration works in collaboration with the Business Administration Department to educate students on how to apply business principles to the implementation of fitness programming. Students who pursue the Fitness Management track will also graduate with a minor in Business Administration. As part of the graduation requirement, students in the Fitness Management track complete an internship working primarily in athletic, commercial, corporate or community fitness settings. The combination of Exercise and Sports Science coursework, business theory and practical experience prepares students in the Fitness Management Track to obtain employment in the fitness industry or pursue advanced degrees.

2011/2012
SUGGESTED FOUR-YEAR PLAN OF STUDY
FITNESS MANAGEMENT TRACK (B.S. Degree)
EXERCISE AND SPORT SCIENCE

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FRESHMAN YEAR

Fall Semester			Spring Semester		
ENGL 1100	Writing I (AR1)	(3)	ENGL 1200	Writing II (ART)	(3)
BIOL 1200	A&PI (OPTION III)	(4)	BIOL 1300	A & P II (OPTION III)	(4)
PSY 1100	Gen Psych (CTW)(HMN)	(3)	BSAD 1700	CIS for Business	(3)
XXX	Art or Music Elective (ART or AOM)	(3)	EXSS 2500	Human Motor Develop.	(3)
EXSS 1011	Intro to Exercise Science	(3)	XXX	Science Cluster Elective	(3 or 4)
Total Credits		(16)	Total Credits		(16or17)

SOPHOMORE YEAR

Fall Semester			Spring Semester		
EXSS 2050	Functional Anatomy	(3)	EXSS 2072	Exercise Physiology II	(4)
MATH 1250	Intro to Functions (SMT)	(3)	XXX	LA&S Elective	(3)
BSAD 3200	Prine of Management	(3)	ECON 1200	Microeconomics (CTW)	(3)
CHEM 1200	Chemistry for Health Sciences (SMf) (LAB)	(4)	XXX	Arts Cluster Elective	(3)
EXSS 2071	Exercise Physiology I	(4)	BSAD 3300	Fund of Marketing	(3)
Total Credits		(17)	Total Credits		(16)

JUNIOR YEAR

Fall Semester			Spring Semester		
EXSS 3020	Biomechanics of Sport	(3)	EXSS 3450	Exercise Testing & Prescription	(4)
EXSS 2300	Sports Nutrition	(3)	BSAD 2020	Managerial Accounting	(3)
XXX	LA&S Elective	(3)	EXSS 3120	Strength, Training & Cond	(3)
BSAD 2010	Intro Financial Reporting	(3)	XXX	Science Cluster Elective	(3or4)
XXX	Literature Elect(ART) (LIT)	(3)	XXX	Free Elective	(3)
Total Credits		(15)	Total Credits		(16or17)

SENIOR YEAR

Fall Semester			Spring Semester		
EXSS 2400	Health Promotion	(3)	EXSS 4200	Senior Seminar	(3)
EXSS 4025	Motor Learn. & Control	(3)	EXSS 4950	Internship	(6)
BSAD 3500	Business Law	(3)	EXSS 4040	Fitness Management	(3)
XXX	History Elective (CTW)	(3)			
XXX	Free Elective	(3)			
Total Credits		(15)	Total Credits		(12)

Total Credits: 123 or 125 depending on SMT electives

2011/2012

SUGGESTED FOUR-YEAR PLAN OF STUDY
CLINICAL EXERCISE PHYSIOLOGY TRACK (B.S. Degree)
EXERCISE AND SPORT SCIENCE

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FRESHMAN YEAR

Fall Semester			Spring Semester		
ENGL 1100	Writing I (AR1)	(3)	ENGL 1200	Writing II (AR1)	(3)
BIOL 1200	Anatomy & Physiology I	(4)	BIOL 1300	Anatomy & Physiology II	(4)
BIOL 1800	Gen BioI (SM1) (LAB)	(4)	BIOL 1900	General Biology II (SM1)	(4)
PSY 1100	Gen Psych (CIW Elective)	(3)	EXSS 2500	Human Motor Develop	(3)
EXSS 1011	Intro to Exercise Science	(3)	XXX	Art or Music Elective	(3)
Total Credits		(17)	Total Credits		(17)

SOPHOMORE YEAR

Fall Semester			Spring Semester		
EXSS 2050	Functional Anatomy	(3)	EXSS 2072	Exercise Physiology II	(4)
CHEM 1200	Chemistry for Health	(4)	XXX	CTW Cluster Elective	(3)
<i>or</i>	Sciences (SMT Elective)		XXX	History Elective (CTW)	(3)
	<i>or</i>		XXX	ART Ouster Elective (ART)	(3)
CHEM 1300	Gen Chern I (SMT Elective)		XXX	Free Elective	(3)
MATH XXX	College-Level Math (SMT)	(3)			
XXX	Literature Elective (ART)	(3)			
EXSS 2071	Exercise Physiology I	(4)			
Total Credits		(17)	Total Credits		(16)

JUNIOR YEAR

Fall Semester			Spring Semester		
EXSS 3020	Biomechanics	(3)	EXSS 3450	Exercise Testing &	(4)
EXSS 2300	Sports Nutrition	(3)		Prescription	(3)
XXX	LA&S OPTION Course	(3)	EXSS 4045	CV Physiology	(3)
XXX	LA&S OPTION Course	(3)	EXSS 3120	Strength Training & Cond	(3)
			XXX	Free Elective	
XXX	LA&S OPTION Course	(3)			
Total Credits		(15)	Total Credits		(13)

SENIOR YEAR

Fall Semester			Spring Semester		
EXSS 4025	Motor Learning & Control	(3)	EXSS 4950	Internship	(6)
EXSS 3600	Exer Resp/Adaptations	(3)	EXSS 4040	Fitness Management	(3)
	in Special Populations		XXX	LA&S OPTION Course	(3)
EXSS 4200	Senior Seminar	(3)			
XXX	Free Elective	(3)			
XXX	Free Elective	(3)			
Total Credits		(15)	Total Credits		(12)

Total Credits: 122

Samples of Student Work

In addition to the program objectives described in the beginning of this section, the Exercise and Sports Science department has identified a number of specific program goals, which will be discussed in more detail below. The following pages include samples of student work from select assignments that evaluate students' achievement toward particular program goals. Samples from the following assignments are included.

- Blood pressure and body composition labs from *Introduction to Exercise and Sports Science*. These labs test students' competence in measuring blood pressure and body composition as well as correctly classifying the subject's risk or fitness level based on the data collected. These assignments have been used to assess students' competence in health-related fitness testing at the "basic knowledge and skills" level. (Please see section on Outcomes Assessment for details on program assessment.)
- Periodization projects from *Strength Training and Conditioning*. For this assignment, students must use the information they are given on a particular athlete and use the knowledge and skills developed in the course to determine an appropriate training program for this athlete following the various phases of the training cycle. This assignment has been used to assess students' competence in exercise programming for higher level athletic performance.
- Literature reviews from *Nutrition in Sport and Exercise*. For this assignment, students must conduct a literature search on a topic related to sport nutrition and write a thorough review of the scientific evidence related to their topic. This assignment requires students to read and synthesize the scientific literature. This assignment has been used to assess effective written communication and also evaluates students' ability to critically evaluate emerging information in the field.
- Internship portfolios. All students are required to complete a 6 credit (240 hour) internship at a professional site of their choice. This is a culminating experience, where students have the opportunity to apply the knowledge and skills they've gained throughout their four years in the Exercise and Sports Science program to a work-related setting. Students have interned at a variety of locations, including physical therapy clinics, cardiac rehabilitation clinics, nursing homes, fitness centers, sport performance facilities, and training facilities for various sports teams. At the end of the internship, students are required to submit a portfolio containing signed time sheets, daily journal entries, a reflection letter, a transcript of an interview conducted with a professional in the field, and an evaluation by the internship site supervisor. Students also give a 10 minute presentation to faculty about their internship experience. Samples of internship portfolios are provided.

Curriculum Trends

Health and fitness professionals currently are not licensed however, over the past several years, a handful of states (including Massachusetts) have put forth efforts to establish licensure for Clinical Exercise Physiologists. This reflects the consistent consensus that educated, certified, and experienced health and fitness professionals are required to effectively and safely prescribe exercise to various populations (ACSM's Health & Fitness Journal, Nov/Dec 2011). As such, the field of exercise science has been continuously growing to meet the increased demand for educated, certified, and experienced fitness professionals. The U.S. Department of Labor Bureau of Labor Statistics states that jobs for fitness workers are expected to increase 29% over the 2008-2018 decade. This increase is much faster than the average increase of 7-13% for most professions (<http://www.bls.gov/oco/ocos296.htm#outlook>, accessed January 14, 2011). A baccalaureate degree in exercise science with associated certification would strongly position a graduate for a career in the fitness field.

Following this trend towards increased demand for certified practitioners, the American College of Sports Medicine (ACSM) has recently released a new certification: the Group Exercise Instructor (GEI). This certification complements the other seven certifications ACSM offers to health professionals.

Many graduates continue on to pursue advanced degrees in fields such as Physical Therapy, Clinical Exercise Physiology, Athletic Training, Physician Assistant and other allied health professions. In the field of Physical Therapy, requirements have advanced so that candidates must receive a doctorate in the field.

Recently, ACSM has spearheaded the "Exercise is Medicine" initiative. This initiative creates a new way to view the association between physical activity and health and seeks to establish formal working relationships between medical practitioners and health fitness professionals.

The association between behavior change and fitness programming is also gaining momentum in the field. There has been a rise in the demand for "Well –Coaches"--practitioners who focus on a holistic approach to wellness and health.

The curriculum of the Exercise and Sports Science Department mirrors the trends in the field of exercise science by providing students with a strong foundation upon which to pursue graduate work or professional credentialing.

Outcomes Assessment Plan

Assessment of Program

A number of measures will be instituted to ensure regular and consistent feedback regarding program enhancements, student performance, and retention. These include:

Exercise and Sports Science Curriculum Committee: In accordance with departmental policies, regularly scheduled meetings with faculty and student representatives will convene biannually to address such issues as course offerings, teaching needs, administrative challenges, and issues relevant to the administration of the major. An annual review of the curriculum to ensure that the skills, knowledge, and abilities needed in the profession are included throughout the course work in the depth required for professional success.

Student representatives from each track are selected in the fall for that academic year. A meeting of returning majors is held at the start of the fall semester. The meeting is announced via email. Students will make nominations from the floor and then vote on the two representatives. Each term of representation is two consecutive semesters; students may share the position and serve multiple terms. Students must be in good academic standing, and have no incomplete grades.

Exercise and Sports Science Academic Appeals Committee: According to departmental policy, students must maintain an overall GPA of 2.0 or higher and a GPA of 2.5 or higher in EXSS courses to remain in good standing in the EXSS major. If a student's cumulative GPA in the major falls below 2.5 at the end of any semester, that student will be placed on departmental probation. To avoid removal from the major, the student must meet the following criteria:

- A student on probation who has attempted fewer than 33 semester hours and who has maintained a cumulative GPA of 2.1 or higher in major courses may enroll for a third semester to improve academic standing.
- A student on probation who has attempted fewer than 59 semester hours and who has maintained a cumulative GPA of 2.3 or higher in major courses may enroll for a fifth semester to improve academic standing.

Students on probation must:

- Meet with their academic advisor before the start of the second week of each semester to review current course load and arrange periodic meetings throughout the semester.
- Contact the Academic Advising Center during the first two weeks of the semester.
- Utilize the many resources the university offers, including faculty, Counseling Services, Academic Success Centers, Expanding Horizons, Career Services, and other support systems, as needed.

Students not making satisfactory progress in completing the academic requirements of the major for two consecutive semesters will be required to leave the EXSS major.

Any student required to leave the EXSS major due to deficient academic progress may appeal to the EXSS Academic Standing Committee. The student will be allowed to present evidence of significant extenuating circumstances. The Academic Standing Committee will take this information into consideration and issue a recommendation to the Chair of the EXSS Department within 24 hours following review of the appeal letters. The EXSS Department Chair will notify the students within 3 days of the departmental ruling.

Meetings of the Major: In accordance with departmental policies, meetings of the students and faculty must be held each semester. Each fall, the department holds two such meetings, one for incoming freshmen and transfer students and one for returning majors. In these meetings, we discuss 1) updates and announcements about the major, 2) departmental policies, including the academic standing policy, 3) immediate concerns/issues of the students, 4) Exercise and Sports Science Club updates. Additionally, each semester a meeting is held specifically for students planning to complete their internship in the upcoming semester. The purpose of this meeting is to distribute the internship handbook and discuss the requirements of the internship.

Feedback from Students: In addition to the department curriculum committee and meetings of the major, there would be several opportunities for students to give feedback about the courses and the major. The preferred means is conversation with the course instructors or the Department Chairperson. Another avenue is the reflective letter students write as part of the Senior Seminar portfolio. Finally, information may be gathered during an exit interview with students who choose to leave the major and/or the University to ascertain their reasons.

Academic Advising: Each student, upon declaring Exercise and Sports Science as a major, will be assigned an academic advisor who will work with the student to ensure that he/she is progressing through the program. Advisors meet with students on a regular basis (per Fitchburg State contract) to provide academic and career counseling, and to assist students in building their portfolios.

Assessment of Learning

In addition to course grades, assessment of learning will take place in the following forms: through a comprehensive long-term assessment plan, involving review of student work from all courses taught in the core Exercise and Sports Science curriculum and evidence of career success.

Departmental Assessment Plan: Over the last several years, the faculty of the Exercise and Sports Science has spent considerable time setting up a detailed plan for assessing student learning. We have identified the following program goals:

1. Demonstrate effective verbal communication
 - a. in a general formal presentation
 - b. in a formal scientific presentation
 - c. in an informal setting
2. Demonstrate effective writing
3. Demonstrate competence in health-related fitness testing
4. Demonstrate competence in performance-related fitness testing
5. Demonstrate competence in exercise programming for healthy populations
6. Demonstrate competence in exercise programming for higher level athletic performance
7. Demonstrate ability to adapt strength and cardiovascular conditioning protocols for special populations
8. Demonstrate ability to collect and interpret physiological data
9. Demonstrate ability to describe and demonstrate safe and effective strength and conditioning methods
10. Demonstrate ethical reasoning
11. Demonstrate knowledge in a variety of content areas
12. Demonstrate ability to apply knowledge in work-related settings

13. Demonstrate ability to critically evaluate emerging information in the field
14. Gain admission to graduate programs, when desired
15. Pass national certification exams

We began implementing our assessment plan in the spring of 2007, and since that time have completed assessments for the first three program goals. In response to our initial assessments, we did implement several curricular changes. For example, we found that some students did not perform as well as expected when taking exercise blood pressure measurements. This is an observation that some internship advisors have made as well. We have addressed this problem in several ways.

- We have purchased two high-quality stethoscopes
- We have concentrated more on learning this skill in beginning level labs so it can be reinforced in advanced courses
- We have added a blood pressure response lab to our upper level CV Physiology course
- We have added a lab practical in Exercise Physiology, which includes ability to assess BP at rest and during exercise

Through evaluation of student presentations and research papers, we also discovered weaknesses in presentation skills and information literacy. We have added more instruction on how to give a good presentation, both in classes where students give presentations and during the internship organizational meeting. Students in Introduction to Exercise Science are not also required to give a brief presentation. Regarding information literacy, students in the Introduction to Exercise Science course participate in a library session aimed at teaching students how to conduct a literature search, use library databases in this search, and critically evaluate the sources they find. Library instruction is also sprinkled throughout more courses in the curriculum to reinforce this important skill.

Our early assessments did lead to some important changes in our curriculum. However, we also determined that to obtain more valuable data, we needed to alter some of the assessments, which included changing some of the rubrics used, ensuring consistency in how the faculty were interpreting the rubric categories, and determining how to evaluate group presentations. Additionally, in the fall of 2009, we developed a curriculum map, wherein we not only identified which courses would be used to assess particular program goals, but also the level of mastery we expected in a particular course. We determined three levels of mastery (basic knowledge and skills, working knowledge and skills, and demonstrated competence). Please see curriculum map at the end of this section.

Our current assessment plan is to meet at the end of each academic year to 1) discuss that year's outcomes data, 2) determine what, if any, curricular changes should be implemented, 3) determine if any additional resources are required to support those curricular changes, and 4) decide on an assessment plan for upcoming academic year. Each year we decide which goals will be assessed, which artifacts will be used for assessing those goals and which faculty members will be involved in the assessments. In our department, we share the work of assessment. For each artifact, the same two faculty members review all samples of student work and assess them independently. Pairs of faculty are assigned to the various program goals/artifacts identified for assessment each year.

Assessment Summary: In this section, we summarize the Exercise and Sports Science department's assessment efforts for the last two academic years and describe the assessment plan for the current academic year.

AY 2009-2010

The majority of our assessment efforts during AY2009-1010 were in reorganizing our assessment approach, as described above. This included the development of a curriculum map and rubrics with a more consistent format. Goals 3 and 5 were evaluated during this year.

- For Goal 3, we identified the blood pressure and body composition labs in Introduction to EXSS as the artifact for assessment this year. The table below includes the average score for each for each of the 3 categories.

	Evaluator 1	Evaluator 2
Average score for techniques	2.8	3
Average score for calculations	2.7	2.8
Average score for classification/interpretation	2.4	2.7

*19 total samples; each category assessed on a 1-3 scale

*See attached rubric

- Based on these data, students appear to be strongest in the area of data collection. The department decided to move on and assess this goal in a different class at the “demonstrated competence” level.
- For Goal 5, we identified the final projects for Strength and Conditioning as the artifact for assessment. The table below includes the average score for each for each of the 3 categories.

	Evaluator 1	Evaluator 2
Average score for scientific	1.86	1.43
Average score for organization	2	1.72
Average score for training load	2.14	1.72

*7 total samples; each category assessed on a 1-3 scale.

*See attached rubric

- Based on these data, the students were not meeting the competency standards for exercise programming in healthy populations.
- We opted to repeat this assessment to obtain more data.

AY 2010-2011

During AY2010-2011, we assessed goals 3, 5, and 6.

- During the spring semester, the faculty observed and evaluated practical exams in the Exercise Testing and Prescription class to assess Goal 3. Each student had to perform a battery of standard health-related fitness tests on a client. The table below includes the average score for each for each of the 4 categories. Due to a small class size and two client cancellations, only 4 practicals were observed.

Knowledge/execution of test	2.13
Data collection	2.0
Calculations/interpretation	2.75
Safety	2.75

*4 total samples ; each category assessed on a 1-3 scale.

*See attached rubric

- Although students appeared to be meeting the standards set for this goal, we felt four samples were not enough to make this determination. We therefore decided to repeat this assessment in fall 2011 to collect more data.
- One thing that was noted was how nervous students were when performing the practical. This assignment was the first time students were working with actual clients, and they also had the extra stress of testing their client in front of two additional faculty members who were observing them for assessment. The instructor of the course saw students making mistakes on tests they had performed correctly throughout the semester. Discussion at our faculty meeting resulted in the instructor agreeing to add in a practice session mid-semester, which will include a shortened version of these tests. That way, the end of the year practical exam will not be the first time students are working with actual clients (rather than classmates) or performing in front of other faculty.
- For goal 5, we evaluated case studies from Exercise Testing and Prescription.

	Evaluator 1	Evaluator 2
Risk Factor Identification	2.75	1.75
Risk Factor Stratification	2.5	2.13
Assessment	2.13	2.38
Program Design--general	3.0	2.75
Program Design—CR	2.0	2.0
Program Design—Strength	2.13	2.0
Program Design—flexibility	1.88	1.63

*8 total samples; each category assessed on a 1-3 scale

*values are the average of all 8 samples

*See attached rubric

- Based on these data, students are meeting the minimum standard set for exercise programming for healthy populations. We did, however, expect the scores to be closer to 3, given the focus on exercise testing in this course. Additionally, program design for improving flexibility appeared to be a weakness. Thus, as a faculty, we felt there was room for improvement and decided to repeat these assessments the next year.
- Students in this class spend extensive time working on case studies in class and receive detailed feedback from the instructor on these case studies. Yet, students continue to be weak in applying the FITT principle, which underlies exercise programming. As with the assignment used for Goal 3, the instructor of this course will give students a practice case study exam earlier in the semester. Our hope is that this will 1) give students more feedback so that they will perform better next time, and 2) help them organize their thoughts and plan their time, as this

assignment was more like an exam, being completed in a closed-book fashion during 1 class session.

- For Goal 6, we identified the final projects for Strength and Conditioning as the artifact for assessment this year. The table below includes the average score for each for each of the 3 categories.
- We had previously used this assignment to assess Goal 5. However, after some discussion, the faculty agreed this would a more appropriate artifact to assess Goal 6, as all but 1 of the projects involved developing a training program for an athlete.

	Evaluator 1	Evaluator 2
Average score for scientific	2	2.33
Average score for organization	2.17	2.33
Average score for training load	2.17	2.17

*6 total samples; each category assessed on a 1-3 scale.

*See attached rubric

- Based on these data, students are meeting the standard for this goal.

AY 2011-2012

Our plan for the current academic year is to repeat assessments for goals 3 and 5 using the same assignments used last year. In addition, we are assessing goal 1: effective verbal communication. In the fall, we evaluated 5 samples from the practical exams in Exercise Testing and Prescription to assess both goal 3 and informal verbal communication with a client (Program Goal 1C). We also plan to assess verbal communication in formal presentations in the spring semester.

	Evaluator 1	Evaluator 2
Knowledge/execution	1.8	2.2
Data collection	2.0	1.8
Calculations/interpretation	2.2	2.2
Safety	2.6	2.8

*5 total samples; each category assessed on a 1-3 scale.

*See attached rubric

Career Success: Students will be tracked for success in three areas: number who take and pass certification exams, employment in the exercise science field, and graduate school acceptance. This will be carried out through annual surveys sent by the department. Data from the first alumni survey is presented later in this section.

Effectiveness of Curriculum

The following lists include employment possibilities; some in the Clinical Exercise Physiology Track may require a graduate degree. Students who elect a broader program of study may opt for graduate education, or work in the commercial, corporate, or hospital-based fitness industries.

Clinical Exercise Physiology Track

Cardiac Rehabilitation
Pulmonary Rehabilitation
Pediatric Rehabilitation
Cardiopulmonary Exercise Testing
Corporate Rehabilitation Centers
Industrial Rehabilitation Centers
Physical Therapy Assistant
PT/OT Centers
Occupational Physiology
Higher Education
Fitness Industry
 Health/Fitness Clubs
 Equipment Design
Health Laboratory Technician
Research in Health and Exercise
Physician Assistant
Chiropractic
Resident Care Facilities
Spas/resorts/cruise lines

Fitness Management Track

Commercial Health/Fitness Clubs
Corporate/Employee Wellness Programs
Fitness Equipment Marketing/Sales
Fitness Equipment Installation
Technological Support for Centers
Fitness Equipment Design
Hospital-based Wellness Programs
Personal Trainer
Small Business Owner
Management Consultant
Municipal Fitness/Recreation Programs
Equipment Sales
Resident Care Facilities
Spas/resorts/cruise lines

Articulation Agreements

Fitchburg State University has an articulation agreement with Mount Wachusett Community College. Students graduating from the Mount Wachusett Community College Fitness Leadership and Exercise Science Concentration degree program with a qualitative grade point average of 2.5 or greater may transfer to the Fitchburg State University Exercise and Sports Science Fitness Management major with a maximum of 68 transfer credits.

Exercise Science Laboratory

The basic mission of the Exercise Science Laboratory (located in Rec. Center) is threefold: teaching, service, and research.

The laboratory is primarily for teaching, where students can gain hands-on experience utilizing a wide variety of instrumentation that is commonly used in fitness, clinical, and research settings. An inventory is provided in the "Resources" section of this report. The laboratory is used for such courses as Introduction to Exercise Science, Exercise Physiology I and II, Functional Anatomy, Biomechanics, Exercise Testing and Prescription, Special Populations, and Cardiovascular and Electrophysiology.

Secondarily, the laboratory is used in service to athletic teams at FSU. Parameters pertinent to specific sports are measured upon request. We have the potential to expand beyond FSU boundaries and provide the local and regional community with educational, collaborative, and consulting services.

Thirdly, the laboratory is used for research. A number of students have worked with faculty on collaborative research projects. Data from some of these projects have been presented at the University's Undergraduate Conference on Research and Creative Practice.

Health and Fitness

The health and fitness program was designed to foster healthy and physically active lifestyles. Students at Fitchburg State University must satisfy a three credit requirement in Health and Fitness as part of the liberal arts and sciences requirement. The requirement may be met by the successful completion of Health and Fitness or Exercise, Nutrition, and Heart Disease. The goals for these courses are to increase student knowledge, understanding and competency in this area. Both classes are taught by faculty in the Exercise and Sports Science department. Students in the Leadership Academy Honors Program complete this requirement through the Leadership course, Experiential Approaches to Wellness.

Most students take the Health and Fitness course; between 12 and 16 sections are offered each semester. The course is offered within designed parameters set by instructor prerogative. Topics covered include fitness components, nutrition, weight management, heart disease, wellness components, mental health, stress management, human sexuality, substance use and abuse, and communicable and non-communicable diseases.

Exercise, Nutrition, and Heart Disease will be offered once a year. This course is health and fitness oriented, but emphasizes the relationship between chronic diseases, such as heart disease and diabetes, and lifestyle factors like exercise and nutrition.

Feedback from Students

In the spring of 2010, surveys were distributed to alumni of the Exercise and Sports Science Department, who had graduated between Fall 2007 and Spring 2009. A total of 23 alumni responded. At the time of survey, 87% of alumni were employed, 75% of those in Exercise Science related jobs. Further, 17% reported being enrolled in a graduate program related to Exercise Science. In the survey, alumni were also asked to provide feedback on the program. Samples of the completed surveys are attached.

Additional feedback is provided by students during their Senior Seminar class. As part of the students' portfolio, they are asked to write an anonymous letter to the faculty reflecting on their experiences in the Exercise and Sports Science program. Samples of reflection letters written in the fall 2010 course are attached. To summarize, students have found the curriculum interesting and challenging and appreciate the dedication of the Exercise and Sports Science faculty. The most common complaint was the inability to get into needed courses, as sections and seats were limited. This issue is being resolved with the addition of new faculty. Next fall, our faculty will grow from six to eight full-time members.

Twelve students entered the Exercise and Sports Science major in the fall of 2004 as first time, full-time freshman. Of those, 50% graduated from the University within 6 years, 25% with a degree in Exercise and Sports Science. Graduation rates and additional student data will be discussed in more detail in appendices of this report.

Program Goal 5: Competence in exercise programming for healthy populations**Competency Level: Demonstrated Competence****Artifact: ETP final report**

Student's initials: _____

Indicator	Did Not Meet the standard (1)	Acceptably Meets Standard (2)	Comprehensively Meets Standard (3)
Identification of Risk Factors	Missed more than 1 risk factor	Missed only 1 risk factor	Identified all risk factors
Stratify risk	Incorrectly stratified.		Correctly stratified
Assessment	Incorrectly categorized more than one test item	Incorrectly categorized only test item	Correctly categorized according to the norms
Program Design - General	Did not include one or more components of physical fitness		Included all components of physical fitness
Program design CR Fitness	Did not include all components of FIT	Included all components of FIT, program was reasonable based off of client status and fitness level	Included all components of FIT, program was reasonable based off of client status and fitness level. Specifically calculated target HR, a specific mode, specific duration, and specific days for activity
Program design Strength	Did not include all components of FIT	Included all components of FIT, program was reasonable based off of client status and fitness level	Included all components of FIT, program was reasonable based off of client status and fitness level. Specifically prescribed appropriate reps, sets and exercises
Program design flexibility	Did not include all components of FIT	Included all components of FIT, program was reasonable based off of client status and fitness level	Included all components of FIT, program was reasonable based off of client status and fitness level. Specifically prescribed appropriate time, reps, sets, and exercises

Total: _____

Program goal 3: Competence in health-related fitness testing

Competency level: Demonstrated competence

Artifact: ETP practicals

Student's initials: _____

Indicator	Did Not Meet the Standard (1)	Acceptably Meets the Standard (2)	Comprehensively Meets the Standard (3)
Knowledge and execution of test	Student lacks thorough knowledge of the test procedure and/or makes significant mistakes in the setup and/or execution of the test.	Student displays adequate knowledge of test, sets up test appropriately (including adjusting and/or calibrating equipment) with only minor errors, and accurately completes all parts/stages of test with only minor errors.	Student displays thorough knowledge of the test and sets up and executes test without error.
data collection	Student does not collect all relevant physiological data and/or performs measurements inaccurately or at the wrong time.	Student collects appropriate physiological data at correct time points and with only minor errors.	Student collects appropriate physiological data at correct time points and with accuracy.
Calculations/data interpretation	Student makes multiple errors on calculations and/or misclassifies the client's fitness level.	Calculations are performed correctly with no more than one error and client's fitness level is appropriately determined for each fitness test performed.	Calculations are performed correctly without error and client's fitness level is appropriately determined for each fitness test performed.
Safety	Student makes multiple mistakes that compromise safety.	Student executes test safely with no more than one safety oversight.	Student executes all parts of the test safely.

Total Score: _____

Program goal 1C: effective informal communication

Competency level: Demonstrated competence

Artifact: ETP practicals

Student's initials: _____

Indicator	Did Not Meet the Standard (1)	Acceptably Meets the Standard (2)	Comprehensively Meets the Standard (3)
Description of test purpose and procedures	Student either fails to describe the purpose of the test or test procedures or describes them incorrectly	Student makes small error when describing test procedure or omits one or two points	Student describes test purpose and procedures clearly and completely
Attentiveness to subject/client	Student neglects to communicate and observe client, inquire how s/he is doing, or ensure that client is completing tests correctly and safely	Student observes client most of the time, but either has one instance where focus is more on data than subject or where client performs task incorrectly or unsafely.	Student continually watches client, inquires how s/he is feeling, and responds to client's needs or questions. Student notices and corrects client when performing a task incorrectly and ensures that all tasks are performed safely.
Description of fitness test results	Student does not discuss test results with client, or gives them incorrect information about their results	Student describes test results with client, but may fail to use layman's terms or relate to fitness or disease risk	Student clearly and completely describes all test results in layman's terms and relates to fitness and risk for disease
Professionalism	Student is inappropriate or too informal with client		Student conducts him/herself in a professional manner at all times

Total Score: _____

Program Goal 6: Competence in exercise programming for higher level athletic performance

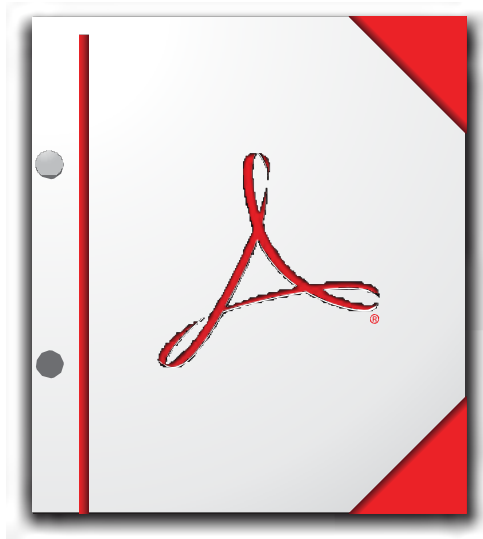
Competency Level: Demonstrated Competence

Artifact: Strength and Conditioning Papers

Student's initials: _____

Indicator	Did Not Meet the Standard (1)	Acceptably Meets the Standard (2)	Comprehensively Meets the Standard (3)
Scientific	This paper doesn't show significant scientific thought in the strength training and/or conditioning portion of the training program	Two or fewer mistakes in the training plan, but does not affect the overall effectiveness of the program.	Excellent scientific basis for the program; no fundamental mistakes in application of the science to the training plan.
Organization	This paper lacks a clear sense of direction. One or more cycles are missing and/or the transitions between cycles are missing.	The program has pre-season, in-season, and out-of-season cycles with only minor flaws in the transition between cycles.	The program has out-of-season, pre-season, in-season and post-season cycles with appropriate transitions between cycles.
Training Load	The training load for either the strength or condition portion is completely inappropriate for the athlete described.	The training load described is appropriate for the individual described with only minor flaws in the frequency, intensity, and volume of training prescribed.	Excellent program design with no flaws in the magnitude of the training load prescribed.

Total Score: _____



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The Exercise and Sport Science program at Fitchburg State University has been an extremely fulfilling experience. Despite the fact that the major has grown in size throughout the past four years, it has remained a relatively small major throughout the time I have been here. The small size of the major allowed for small class sizes. The small class sizes are a big factor regarding my success in this major. It was possible to get to know the professors very well and the professors are able to get to know the students individually. The small class sizes also allowed the students to have the opportunity to have a great deal of hands on experience applying different concepts that had been covered in lectures and lab. The hands on experience that the students here receive include running different exercise tests, using the metabolic cart, and placing leads for a 12 lead EKG. Students that attend larger schools that have more people in the Exercise and Sport Science program do not get the same opportunity to learn things the way that the students at Fitchburg State can. I am confident in my ability to run tests in a laboratory setting because of the hands on learning experience I took part in during this program, and I feel that my experience with research in a lab setting will set me apart from other graduate school and employment applicants that I will be going up against in the future.

The wide range of classes has allowed me to become knowledgeable in many different areas of Exercise and Sport Science. Because of this program I have a knowledge base in a wide variety of topics from strength training to cardiovascular physiology and sport nutrition. The classes I took here in this program were rigorous and required a lot of time and work to master the topics taught in each class. I feel that these rigorous courses have helped prepare me for classes I will see in graduate school. I am confident that the Exercise and Sport Science program has prepared me *and* given me the educational background necessary to succeed in graduate school.

There are many positive aspects of this program. I feel that the program could be improved slightly. Usually there is only one section of a course run during a given semester. I think that if there

were more faculty members in the department it would be possible to run more sections of courses throughout the semester. I think that this will help future students because it will be easier to stay on track with the four year plan for the program because students will not have to worry about not being able to take a prerequisite that they need because it fills up before they are able to register. A larger lab space would also improve the program. I feel that if there was more equipment and more space within the lab students could gain even more hands-on experience which will further set them apart from other graduates in this field and will aid in learning new and different concepts. I feel that this program was exceptional and has allowed me to grow as a student, a researcher and a clinical exercise physiologist within the field of Exercise and Sport Science.

LETTER OF REFLECTION

As a student at Fitchburg State University, I have gained important education and experience in the Exercise and Sport Science program. The major has allowed me to learn and explore different job opportunities within the field also through the concentration of Clinical Exercise Physiology.

Upon entering the major, I was only familiar with a couple of career opportunities such as Physical and Occupational Therapy. More opportunities have opened up through various coursework within the time I have spent at Fitchburg State University. Some of the courses that have opened up different career paths for me are Strength Training and Conditioning, Cardiovascular Physiology, Biomechanics, to name a few. Correspondingly, these career choices could be from becoming a Strength Training and Conditioning coach, Cardiac Rehab Specialist, or a Biomechanist.

Clinical Laboratory sessions are imperative to me as I want to work in the clinical setting once I graduate from Fitchburg State University. They have allowed me to learn about safety in this setting as well as how to administer VO_2max and Sub VO_2max protocols for cardiorespiratory fitness. I have also acquired other important laboratory competencies that will have prepared me to work in the clinical setting.

One thing that I do enjoy in the Exercise and Science program is the number of students in each class. This reflects how well I learn and get to apply it to real situations in the lab or in lectures. The class sizes are roughly between 15 to 30 students so there is always time to ask questions for feedback during class time. There are also enough students to **for** groups with to accomplish assignments whether its research or an individual assignment

The faculty in the Exercise and Science program are great professors. In each course that I have taken, each professor has ensured that I am learning to my maximal capacity by involving me in class discussions and asking for my opinion. They also have informed me to stop by their offices if I have had any questions. Knowing that I am capable to do this has made me a more confident student in knowing that it is absolutely OK to be wrong and questionable about coursework.

I have grown in this major from being intimidated, shy, unwilling to participate, and frightened in clinical labs to confident, talkative, positively opinionated and proud of what I have accomplished in this major. This major has ultimately prepared me for the outside world to work in the clinical setting with professionals and patients.

Life as an Exercise and Sports Science Major

Being a senior in the Clinical Exercise and Sport Science major at Fitchburg State University I have taken a lot from this experience. For the past four years I have seen many ups and downs, good and bad, and both fun and stressful situations, all of which have helped me grow. Overall all have helped me gain a better appreciation for the University and this young up and coming major.

To be honest Fitchburg State wasn't my first choice of colleges. In fact I transferred from the University of Massachusetts Lowell. My reason for this was that UMass Lowell had the Physical Therapy Graduate program I was looking into. After a semester there I realized that *wasn't* the place for me and I quickly transferred back to my hometown, Fitchburg. Upon my first semester here I took the introduction course into the major. From that moment I knew this was the place for me. Its challenging science based concepts and rewarding interpersonal communication aspects are what I looked forward to. As a freshman I didn't know many people. In fact all I knew was college and homework. It wasn't until my sophomore year that I became more involved within the major. This meant that I wasn't afraid to ask a professor questions and I found myself learning a lot from the experience of my peers. At this point I saw my people skills increasing. When I joined the track team that winter I found it easier to approach others, but more importantly I had already learned the importance of practice on the track as well as the weight room. From my Functional Anatomy, Intro to Exercise and Sport Science, and Exercise Physiology classes I began applying the aspects of specificity, periodization, and overload principles I learned to the real world. No surprise that at that point I not only saw myself achieving high grades in my classes but I also saw success on the track as well.

Junior year I found that getting into classes was a little bit more difficult. This meant that this once small major where it was easy to get into was slowly growing in popularity. For my first semester I only took 3 classes, but they were probably three of the hardest classes I would have to take. These classes included Exercise Metabolism, Biomechanics, and General Chemistry. Between labs, group research projects, and hours of studying I was kept busy. This semester I found that my knowledge of the concepts I previously learned in the major were starting to come together. I was able to not only explain the process of glycolysis and beta oxidation but was also able to identify which types of exercises would elicit each of these energy systems. I learned how to conduct a group research project. My group looked at the Effects of Different Modalities and Intensities had on Energy Expenditure. I became more familiar with the library's search engine and analyzing previous research.

It was no surprise that because of the increasing toughness as well as numbers in the major that the tutor center would be looking for more tutors. After previously turning down the offer I was quick to

apply at the next opportunity. Being a tutor in the Exercise and Sport Science major has been rewarding and challenging at the same time. It was challenging trying to get fellow students to interrelate all the concepts because after all everything was built off of each other. It was also hard to suggest new studying techniques to them because once you make it to college many think they have already figured out how they learn and study. It was rewarding when you see the smiles that others get when they figured out the answers or obtain better grades on their work. This has helped me grow as well in the major. One of the biggest things it has helped me do was to stay refreshed on the material. This gave me an advantage in my classes that followed because these concepts were fresh in my head. This has also helped me work on my communication skills. Communication is important in the major. There are all types of people in this world therefore being able to work fellow peers as well as professors to increase success in the major are little things that will help me when I go on to graduate school and eventually begin a career. I will be able to take on constructive criticism with a more open mind and be able to work in partnership with clients and colleagues to better the schools and jobs I attend in the future.

As a senior I have almost completed every course the major offers and I feel that I am better prepared to take on whichever paths I choose to take on after. I will take a lot from my experience at Fitchburg State University, especially from being in the Exercise and Sports Science major. I have grown not only as a student, but as an athlete, and person. The professors have always been there to help make sure that as students we are competent enough to withstand the futures that we choose to encompass. I feel that I am more confident to apply to graduate schools because I know that the Exercise and Sports Science program has prepared me just as much if not more than the other candidates applying. It is up to me now to use all of this knowledge of communication, respect, and confidence to sell myself to achieve my goals.

Fitchburg State University

My experience here at Fitchburg State University is one that differs from most students. ■ was fortunate enough to be able to take a position in the work force, within my own major as well. ■ have seen the real world application of certain classes, labs, and projects that ■ have completed at FSU. ■ strongly believe that my experience at FSU has propelled me to have great real world knowledge of the Exercise and Sports Science world.

There are classes within the Exercise and Sports Science major at Fitchburg State University that have direct applications in the work place. The research done while completing my degree at FSU was very hands on and informative. Real world labs that students such as myself have taken part in have been responsible for my personal awareness of certain situations that have presented themselves while working in the personal training field. Protocols that students have learned through taking the measurements themselves, not just through a lecture or presentation, have made a very large difference in how ■ personally act and carry myself in the real world. ■ have come across students from other well known Universities that have never had the hands on capability that students at FSU were able to achieve.

The professors at Fitchburg State University are all very well educated, and most know how to pass that along to students in the way that the information becomes second nature and understood. Professors were always very accessible which made potentially very tough projects, research studies, and other class orientated work easy to understand and be able to retain information.

The ability to be surrounded by not only professors, but very well educated students within my major has proven to be invaluable. When the students around you have all had this level of education it also rubs *off* on anyone present. The learning environment at FSU was one that ■ have yet to see elsewhere and stands out as one of the best programs not only at the University, but across the entire region.

■ have had the opportunity to gain real world experience while studying at Fitchburg State University as well. The Internship program that ■ was involved in was a total of 240 hours. ■ was able to not only scratch the surface of a potential field of work, but gain access to the inside of the organization and be an integral part of their business. The Internship program at FSU prepared me for what to expect after ■ graduate and having the extended 240 hours really helped to mold my feelings, thoughts, and questions ■ had regarding the Exercise and Sports Science world.

Overall, at Fitchburg State University, ■ have been able to excel in every aspect of this field. ■ was able to gain real world experience, and see firsthand how the degree and classes within the degree have proved to be valuable to everyday work-life in the fitness industry.

Reflection Letter

Back in 2008 when I first came to this school I had no idea how my life would end up or what I wanted to do as a career. Fitchburg State University has shaped me into the professional woman I am today. Before I came to this school I thought the Exercise and Sports Science Program was designed for personal training. It wasn't until I decided to go towards the concentration did I realize how many opportunities this major has. My first year had its ups and downs. Some classes sparked my knowledge like functional anatomy and human motor development. I picked up these subjects quickly and excelled at them. I even believed that I really wanted to work with children with motor developmental problems. Then there were the classes like writing and world civilization that I couldn't get into because they had little to do with what I wanted to do as a career.

As the years went on the courses got harder and my stress level rose. There were some classes that came easy to me but more courses that I had to work hard to receive a decent grade. Overall I was happy with the courses that were offered in this program. The courses varied in selection and were able to cover a lot of material as well. One huge thing I think every Exercise Program should have is lots of laboratory classes. So far I've had three courses that had mandatory labs and just about every other course in the program contained many labs throughout the semester. Even classes outside of the major like anatomy and physiology and chemistry work on labs.

I think the best way someone can learn is through doing the actual procedures. What was great about these labs were that they were very independent. Although the professors were always there to help they never walked us through step by step. We had a chance to explore and

learn by mistake. We even had the opportunity to work on fellow students actually running procedures like a professional would do. I think out of anything this is what I will take away from the program. This program has also allowed me to work on many research projects. In one class, exercise metabolism, I got to design a research lab and run it. Although I don't plan on becoming a researcher it has gave me the experience that many students don't get the chance of having.

Lastly this program has some of the best staff anywhere. These professors not only know so much about each course, but they are willing to work one on one with students who ask for the help. The classes are small enough that every professor knows all their students. I have built some strong student-teacher bonds with my professors on a professional level. Everyone knows how important it is to show professors respect, but I've notice too that the professors respect the students as well which is uplifting to know they believe in us. They all have truly made my experience at FSU a positive one and I will never forget the dedication they have to the classes and their students.

Reflective Letter

Dear Fitchburg State University Exercise and Sport Science Program,

I distinctly remember my very first day of classes back in September of 2006. I pulled into my parking spot that day thinking to myself, "Well here goes the next four years of my educational life." I was very curious yet timid that day to see what my classes and professors had to offer. I had chosen this major for a reason and knew that I had some challenging yet eventful times ahead of me. Little did I know that this major was a lot more difficult than I had originally thought. I think I was like every other freshman who thought this major mostly consisted of exercise programs, nutritional facts and information about the body's bones and muscles. After a full year later in the program I realized it was so much more than that. Metabolism and how the body generates energy during exercise and kinetic forces that are applied are some of the many things I began to be taught. To be honest, I did not see this coming at all. So naturally I got off to a slow start in the major and played a lot of catch up. I was in over my head as my preconceived notions of what this major was all about flew out the window. As time went on I began to slowly grasp not only the information that was being taught but I understood what it meant to be a true college student. I realized that with much practice and study, I could be a successful student in this major. You see, this major has not only shaped me as a student but as a person as well. It has taught me great work ethic, perseverance, and determination. These few qualities I can take with me when I graduate from here in January and apply them into my everyday life and future employment.

When speaking about curriculum and subject matter, I can honestly say that I feel this program is second to none around. The dedication of these professors and staff members have allowed this major to grow in the four years that I have been here. This major has slowly become

Reflection Paper

The Exercise and Sport Science Program has grown dramatically here at Fitchburg State University since I began my undergraduate degree in the Fall of 2007. There were many reasons why the Exercise and Sports Science Program at Fitchburg State University appealed to me as a high school senior. My acceptance to this university was a milestone in my life. My past four years here have been filled with the proper knowledge and skills I can use in my future endeavors.

As the years progressed, now well into my senior year, I have looked back and realized how much I have actually gained from this program. The small class size makes more room for hands on experiences, such as laboratory time, and more one on one discussion with professors. It has always been an easy task to contact a professor on current issues, which are quickly clarified and answered. Also, having small classes gives the professors a chance to really challenge their students. They are able to ask more questions and give more assignments to push the students to learn the material rather than just memorize it. I believe that myself, and the students in the Exercise and Sports Science Program here at Fitchburg State University, has gained from the demand from the professors.

Small class sizes are a benefit in many ways, but they do have their down falls. When signing up for classes it becomes hard to get a seat because of the size of the class. Not getting into classes can set students back, and sometimes but on an extra semester that they were not anticipating. It was nice to hear that four new faculty members will be hired and more course sections will be added to help students get into all of their classes and graduate on time.

In all, my experience at Fitchburg State University has been great. The hands on laboratory skills, small in-class lectures and the preparation classes, such as senior seminar, have all helped me prepare for my hopes to go on to graduate school. I have had a positive experience being a student in the Exercise and Sports Science program. Every little bit of stress that I have faced was worth it.

Letter of Reflection

When first coming to Fitchburg State I was undecided as to what major I wanted to be apart of, within the first few weeks of classes I chose the exercise and sports science major. I chose to be apart of the clinical path and concentrate in exercise physiology. The beginner exercise science classes really opened my eyes to what the major was all about and reassured me that I had made the right decision. The classes had my attention right away, which was new and exciting for me. As I progressed in the major, the level of difficulty rose and I was challenged in each class. I was able to participate in labs that went along with certain classes to demonstrate basic principles and topics we covered. I was able to do hands on exercises and tests on fellow students and learned how to use the different machinery and testing materials that were made available in the lab. These hands on experiences have prepared me for my future; whether I decide to continue to graduate school or look for employment. I feel confident in my ability due to what I have learned here at Fitchburg State.

When comparing my knowledge and skills from freshman year to now, I can see drastic changes and growth. My knowledge and confidence have come a long way in the past four years, and I feel as though I am ready for the next stage in my life. The exercise science department has prepared me for real life scenarios and expectations. I know what I am capable of and what will be expected of me outside of school because of the exercise science curriculum. The faculty have made themselves available to students and have been encouraging to me throughout my four years in the program.

As a senior, I have seen changes and adjustments to the curriculum in order to better prepare students for graduate school. I was lucky enough to make certain decisions about my classes that would have me meet most graduate school pre-requisites. Throughout my four years at Fitchburg State, registration time periods have been very stressful and have created scheduling difficulties that I have had to deal with. It was frustrating that some classes were only offered one semester of the year, and would get filled up so quickly that underclassmen didn't have much of a chance to get into them. I usually had to run back and forth from registrar to professor's offices to get red carded into specific classes. I would suggest that the exercise science program offer their major classes more often or at least at more convenience to the students. This would benefit the students so they can take those classes in order to meet pre-requisite demands and be able to graduate from the program in the four years that is outlined.

Last spring, the Exercise and Sports Science Club was created and has been trying to recruit members. I was able to join the club the fall of 2010 and think that it offers great opportunities for those in the program. You get to meet with students of all ages who are in the program and can ask them for help, or help others in specific classes. The fundraising and experiences that are associated with the club are very exciting and educational to all of the members. I think the club was a great idea and hope that more students take advantage of what it has to offer.

Molly Maloney

My Experience in the Exercise and Sport Science Program at Fitchburg State University

Throughout my career in this program, I have grown as a student and have experienced many things that will help me to be successful in my career path. I have done many research projects and have had a lot of laboratory experiences. These hands on labs and research projects have given me a lot of experience in how to set up a research project, how to find research, and the appropriate methods to carry out a research project and interpret results. In addition I have learned about and performed many exercise tests. This information will be very useful because more than likely I will be administering exercise tests in my career. In hopes to become a Physical Therapist, I feel that this program has given me a great foundation to further my education and be successful.

The Exercise and Sport Science program here at Fitchburg State University has done a great job of developing a highly intelligent and helpful staff. The faculty has been a huge part of my success here and has given me a lot of information and inspiration to reach my goals. I have learned more in this program that I had ever hoped to learn. The attitudes and enthusiasm of the teachers here make the courses not only enjoyable but inspirational. All the professors in this department strive to make each and every student a successful one. With available office hours for extra help they are always willing to help students reach their full potential. Given the knowledge from my professors in the department has helped me to grow as a student and has motivated me to continue my education to reach my goal of becoming a Physical Therapist. With advice from my professors especially my advisor, Dr. Roberts, I have been given a lot of help and support in working towards my career goal.

Through my experiences with the Exercise and Sport Science program, I have grown not only as a student but as a person who will take with me the lessons of responsibility, organization, time management, and communication. I will be able to use these skills that I have acquired in many aspects of my future. My success and desire to continue my education would not be what it is today without the help from the Exercise and Sport Science Department faculty. I will take with me a lot of knowledge and experience from this program and will continue to strive for success.

Dear Exercise and Sport Science Department:

I want to thank each and every one of you for your time and dedication. I appreciate the time each one of you put into helping me achieve my Bachelor's degree. My time here at Fitchburg State University in the Exercise and Sport Science department has been a wonderful experience. Going into this major I was not sure what I was getting into. I didn't fully understand what exactly this major was all about. However, I had an open mind about it. The faculty of this department are exceptional. They are dedicated to their students and to what they teach. Seeing the love and passion the faculty had for the major made me really open up to it.

Each class I took was challenging, there was never an easy day. This is a good thing though! I was pushed to do my best in each class. There was never anytime to slack off. Some people would see this as a bad thing. For me however this was a great thing. Going into the major I thought I knew how to study properly and I waited last minute to do my work. Becoming part of this major I learned to manage my time and my courses. I learned how to balance out the studying and work for my courses being taken. I am very grateful for being pushed as hard as I was. It is going to help me in the long run as I transition into graduate school.

I really enjoyed how the courses were broken up with labs. I am a hands on learner, so I felt having a lab to back up the course was something I truly benefited from. From my experience there were courses that didn't offer labs with them, but professors added labs to break up the class time and give you some hands on learning. Lab time was also a good time to work together and get to know our peers. Entering this major there weren't as many students as there are now. So during labs and courses we got to know one another and I feel like that helped us each grow more socially. As the semesters went on faces became familiar and names became recognizable, making it easier to do presentations or group work. It created a sense of comfort within the course.

Going into this major I was a young adult on a search for a career path to follow. Exercise and Sport Science and the faculty helped me find that career path. Thanks to the faculty who put their time and dedication into my education I am now on my way to a graduate school with a career ahead of me. So to all the faculty and staff, thank you.

Blood Pressure Lab Sheet

Introduction to Exercise Science <Name> Gl{(hi. .vel-)\}. . CS.

Subject 1: male or female Kieth

BP Reading 1: 110/62

BP Reading 2: 110/70

BP Reading 3: 112/62

Subject 2: male or female Rachel

BP Reading 1: 114/58

BP Reading 2: 114/62

BP Reading 3: 118/58

Subject 3: male or female Kate

BP Reading 1: 108/70

BP Reading 2: 110/72

BP Reading 3: 110/70

Questions:

1. What part of taking SP. weas m ts yo"find to b the most challenging? Be

2. What are some factors that could affect response in a resting subject? In other words, what circumstances could change the BP response in the same subject, Under resting conditions?

Blood Pressure Lab Sheet
Introduction to Exercise Science

Name Yhanam A>hcroft

Subject 1: male

BP Reading 1: 115/75

BP Reading 2: 120/80

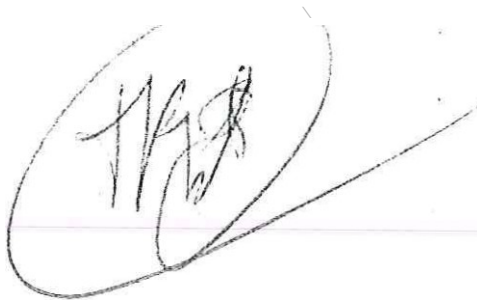
BP Reading 3: 116/70

Subject 2: male 08

BP Reading 1: 120/75

BP Reading 2: 122/75

BP Reading 3: 110/70



Subject 3: @r female

BP Reading 1: 115/70

BP Reading 2: 115/70

BP Reading 3: 115/70

Questions:

1. What part of taking BP measurements did you find to be the most challenging? Be specific.

While taking BP measurements, I found it to be the most challenging. I found that while waiting for the reading, the subject's pulse rate was too high, which caused the reading to be inaccurate. I found that the subject's pulse rate was too high, which caused the reading to be inaccurate.

2. What are some factors that could affect the BP response in a resting subject? In other words, what circumstances might change the BP response in the same subject, under resting conditions?

One factor that could affect the BP response in a resting subject is stress. Stress can cause BP to increase. Another factor is anxiety. Anxiety can cause BP to increase. A third factor is caffeine. Caffeine can cause BP to increase. A fourth factor is exercise. Exercise can cause BP to increase. A fifth factor is medication. Medication can cause BP to increase. A sixth factor is age. Age can cause BP to increase. A seventh factor is gender. Gender can cause BP to increase. An eighth factor is weight. Weight can cause BP to increase. A ninth factor is height. Height can cause BP to increase. A tenth factor is blood pressure. Blood pressure can cause BP to increase.

Subject 1: male or female

BP Reading 1: 120/74

BP Reading 2: 120/70

BP Reading 3: 118/70

Subject 2: male or female

BP Reading 1: 122/78

BP Reading 2: 122/78

BP Reading 3: 118/68

Subject 3: male or female

BP Reading 1: 116/78

BP Reading 2: 116/80

BP Reading 3: 110/70

Questions:

1. Which part of taking BP measurements did you find to be the most challenging? Be specific. The most challenging part of measurement was finding the initial systolic tick over the outside lab room noise. I could often hear other teams recording their data on the table. Also other noises such as talking and even cell phone vibrations were intensified causing an overlap of sounds and possibly sacrificing the accuracy of my top number.
2. What are some factors that could affect the BP response in a resting subject? In other words, what circumstances might change the BP response in the same subject, under resting conditions? A few potential changes in BP response in the same subject are prior caffeine intake, high stress levels, or anxiety about having their BP taken. Also the brand of stethoscope as well as hearing impairment in the examiner can lead to a lack of validity in data.

Name Jared Wiger

Subject 1: -female D^fV.

BP Reading 1: /20j^f-15 ?t(

BP Reading 2: 120/'1()

BP Reading 3: /1'0/10

Subject 2: female<,'a_ BP

Reading 1: /2-2-j?<g BP

Reading 2: 1L7---j 1

BP Reading 3: 11 / 6



Subject 3: male or female Mari'ssa

BP Reading 1: 11 bJ 7'8

BP Reading 2: 11& 0

BP Reading 3: 110j 70

Questions:

1. What pmt of takiny-J3P measurements id you find to be the mosthallenging? Be specific. F 1 "cV(€ 1/1VA h{ <'1C7 i-0L,,c.. (r(Ut.. 6

CA. V>S/tv{) v-m.n-tA.. 1- (kJ 11.t.: ev- +- e<Aok) (('U(<=>
V< lo-rtc.h 1:n.A-s) (.(-v\..Q(v ..-) t="u...-(hL-1.... io- AA (-o w

2. What are some factors that could affect the BP response in a resting subject? In other words, what circumstances might change the BP response in the same subject, under resting conditions? (tv-1A.e.. vvvv z/ k.AS c; '<or 'S {

S v-+ (..1) tv{,v(0 ->0 I. 1\..- (S<;.

<.:I

Name Evan DeAmicis_4/21_

Skinfold Site	Measurement 1	Measurement 2	Calculations (formulas)
Abdomen	_____ (mm)	7 (mm)	$\sum_{i=1}^n (X_i - \bar{X})^2$ $s^2 = \frac{1}{n-1} \sum_{i=1}^n (X_i - \bar{X})^2$ $s = \sqrt{s^2}$
Chest/Pectoral	_____ (mm)	_____ (mm)	
Thigh	_____ (mm)	_____ (mm)	
Total (3 sites) =	12 (mm)	7 (mm)	
Body fat%	3.8625	Classification (percentile):	10

Skinfold Site	Measurement 1	Measurement 2	Calculations (formulas)
Triceps	<u>1</u> (mm)	<u>1</u> (mm)	$1.099421 - .0009929(48)$ $+ .000023(48)^2 - .0001$
Suprailiac	<u>13</u> (mm)	<u>13</u> (mm)	$= 1.0545554$ [Boxed]
Thigh	<u>19</u> (mm)	<u>20</u> (mm)	$495 / 1.0545554 = 469.39$
Total (3 sites) =	<u>48</u> (mm)	<u>49</u> (mm)	$469.3921249 - 450$
Body fat %	<u>14.39212</u>	Classification (percentile): <u>70</u>	$= 19.392$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">1800</div>

Skinfold Site	Measurement 1	Measurement 2	Calculations (formulas)
Abdomen	(mm)	q (mm)	$1.10938 - 0.0008267(21) +$ $0.00000016(21)^2 - 0.002574(20)$ $= 1.08694186$ [Body Density]
Triceps	_____ (mm)	_____ (mm)	
Chest/Pectoral	----- (mm)	----- (mm)	$495 / 1.08694186 = 455.4061429$ $455.4061429 - 450 = 5.4061429$ [Body fat]
Suprailiac	_____ (mm)	_____ (mm)	
Thigh	/ (mm)	■ (mm)	
Total(3 sites) =	<u>C\mm)</u>	11 (mm)	
Body fat%	1(T	Classification (percentile):	f 40

Body Composition Lab Data Sheet
Introduction to Exercise Science

Name Mike Vaughan

Subject 1: *male or female*

Skinfold Site	Measurement 1	Measurement 2	Calculations (formulas)
Abdomen	<u>11</u> (mm)	<u>11</u> (mm)	
Chest/Pectoral	<u>5</u> (mm)	<u>5</u> (mm)	
Thigh	<u>12</u> (mm)	<u>12</u> (mm)	
Total (3 sites) =	<u>28</u> (mm)	<u>28</u> (mm)	
Body fat %			Classification (percentile): <u>Cfo</u>

Subject 2: *male or female*

Skinfold Site	Measurement 1	Measurement 2	Calculations (formulas)
Triceps	<u>20</u> (mm)	<u>20</u> (mm)	
Suprailiac	<u>1</u> (mm)	<u>4</u> (mm)	
Thigh	<u>1</u> (mm)	<u>3</u> (mm)	
Total (3 sites) =	<u>24</u> (mm)	<u>27</u> (mm)	
Body fat%	<u>24.1</u>		Classification (percentile): <u>30</u>

Subject 3: *Br female*

Skinfold Site	Measurement 1	Measurement 2	Calculations (formulas)
Abdomen	<u>1</u> (mm)	<u>7</u> (mm)	
Triceps	<u>1</u> (mm)	<u>1</u> (mm)	
Chest/Pectoral	<u>1</u> (mm)	<u>1</u> (mm)	
Supra iliac	<u>1</u> (mm)	<u>1</u> (mm)	
Thigh	<u>1</u> (mm)	<u>1</u> (mm)	
Total (3 sites) =	<u>5</u> (mm)	<u>5</u> (mm)	
Body fat%	<u>3</u>		Classification (percentile): <u>9</u>

Glutamine Supplementation: Is It Worth the Money?

Chelsea Tremblay

Fitchburg State College

Abstract

Glutamine is the most abundant amino acid in the amino acid pool inside the body's skeletal muscle. Since it is the most abundant, researchers thought it could help with protein resynthesis in the muscle and also aid with immune-depression that come along with intense or extreme exercise. While most of the research points to the fact that glutamine does not aid in the preservation of lean muscle mass, a few studies do show that it helps, but there is no significant difference between glutamine supplementation and a placebo. As for helping with immunodepression, there have been a few studies conducted that result in glutamine helping with immunodepression in athletes after extensive or intense exercise, however the researchers also concluded that there has not been enough research for this conclusion to be definitive.

Introduction

Glutamine is the most plentiful amino acid in human plasma and the pool of free amino acids inside the cells of skeletal muscles. It is synthesized and stored primarily in the skeletal muscle of the body and is released into the bloodstream when necessary. Its role in the human body is destructive metabolism in the abdomen, liver, kidneys, and immune function cells in order to release energy. Glutamine is defined as a non-essential amino acid because the body can metabolize it through transamination from branched-chain amino acids. If glutamine had the ability to preserve skeletal muscle during weight reduction programs then it could be a very beneficial supplement for athletes. This means that an athlete could shed the unwanted weight but still maintain his/her lean body mass, most importantly skeletal muscle.

Purpose

According to Finn, Lund, and Rosene-Treadwell, due to clinical evidence of glutamine supplementation, it is suggested that glutamine has potential utility as a dietary supplement for athletes in heavy exercise training; however no significant differences between glutamine and placebo groups have been reported for any of the variables of strength or body mass (2003). Another study done by Richard Kreider states that glutamine is a common ingredient currently found in many of the weight-gain supplements marketed to athletes and it is an amino acid which has been suggested to promote muscle growth and decrease exercise-induced immunosuppression. With this information, I will prove that glutamine does not provide an athlete with help in preserving lean mass during

intense or catabolic exercises and it does not decrease exercise induced immunosuppression, therefore taking a glutamine supplement is not necessary.

Research

There has been much research done on the supplementation of glutamine. According to the Journal of Sports Science and Medicine, Finn, Lund, and Rosene-Treadwell performed an experiment to see if glutamine supplementation would benefit athletes during short term weight reduction. Their hypothesis was that the supplementation would spare lean body mass. The experiment was performed by 18 subjects who exercised and dieted to create an energy deficit on days 1-5 and days 6-12. The glutamine group, which consisted of 9 subjects, ingested .35 grams of glutamine per kilogram of body weight while a placebo was given to the other 9 subjects. Body mass, lean mass, and fat mass were measured on days 0, 6, and 12. The glutamine and placebo groups both lost significant amounts of body, lean, and fat mass. However, there was no significant difference between the two groups. Their findings point to slight benefit for preservation of lean mass with supplementation of glutamine (2003). Another research article that supports these findings is in the Journal of Strength and Conditioning Research published in August 2006, volume 20, issue 3, a trial was done to determine the effects of protein and amino acid supplementation on performance and training adaptations during ten weeks of resistance training. They conducted this experiment by assigning three groups, prior to exercise program, to a certain supplementation. One group was given 48 grams per day carbohydrate placebo, the next group was given 40 grams per day of whey

protein with 8 grams per day of casein, and the last group's supplementation consisted of 40 grams per day of whey protein, 3 grams per day of branched chain amino acids, and 5 grams per day of L-glutamine. At 0, 5, and 10 weeks, the subjects were tested for fasting blood samples, body mass, and body composition using the dual X-ray absorptiometry, 1 repetition maximum bench and leg press, 80% 1RM maximal repetitions to fatigue for bench and leg press, and 30 second Wingate anaerobic capacity tests. Significant increases in 1 repetition maximum bench and leg press was observed in all groups after 10 weeks. However, the glutamine group did not show the greatest increase in fat-free mass after the 10 weeks of heavy resistance training (2006). Then in the summer of 2005, Nancy Clark, R.D., published an article in the quarterly publication of the ACSM containing information about glutamine supplementation. Clark asks the question, "Does glutamine increase muscle strength and size in healthy athletes?" She answered by sharing the results of a seven week study of glutamine supplementation and rigorous resistance training. In this study the subjects consumed either a sugar pill or glutamine immediately after their workout and before bed. Both groups were able to lift about 16% more weight by the end of the seven weeks and both groups maintain their same body composition. The conclusion was that glutamine supplementation did not offer benefits in terms of increased strength or decreased body fat (2005). These results have been found in many experiments with glutamine supplementation.

In a research article entitled "Addition of glutamine to essential amino acids and carbohydrates did not enhance anabolism in young males following exercise",

researchers examined the effect of a post-exercise oral carbohydrate and essential amino acid, with glutamine, solution versus a CHO-EAA solution without glutamine. The test subjects performed 90 minutes of cycling at 65% V_{O2} peak. Over the 3 hours of recovery time, muscle biopsies were taken to measure glycogen resynthesis and mixed muscle protein synthesis. The results were adding glutamine to a CHO-EAA beverage had no effect after exercise on the resynthesis of muscle glycogen or muscle protein synthesis (2006). R.B. Kreiger performed a study in 1999 in order to find out if there was a correlation with dietary supplements and the promotion of muscle growth with resistance training. He wanted to see if the nutritional strategies of overfeeding, ingesting carbohydrates and protein before and after exercise, and various dietary supplements would have an effect on muscle growth. Some of the nutrients he tested were protein, branched chain amino acids, creatine, leucine, boron, chromium, and glutamine. Kreider found that glutamine supplementation has been shown to increase glutamine levels. Therefore, he goes on to say, that there is some evidence to support glutamine supplementation in which glutamine helps to promote muscle growth and/or prevention of upper respiratory infections among athletes. However, his article concludes by saying that long term studies investigating these claims have not yet been conducted (1999). The next study, from the *International Journal of Sports Medicine*, examines preceding statements that the intake of glutamine and protein-carbohydrate combinations may boost the speed of glycogen resynthesis following extreme exercise. Eight trained subjects were studied during 3 hours of recovery while consuming one of

four drinks in an unsystematic order. Drinks were ingested in three 300 milliliter intervals, immediately after exercise and then after 1 and 2 hours of recovery. Each session of the control drink contained 0.8 g \times kg⁻¹ body weight of glucose. The one of the drinks contained the same amount of glucose and 0.3 g \times kg⁻¹ body weight of glutamine. The next contained the glucose and a wheat hydrolysate, which contained 26 %glutamine. The last drink contained glucose and a whey hydrolysate, containing 6.6 % glutamine. Van Hall et Al states that the "plasma glutamine decreased by approximately 20 % during recovery with ingestion of the control drink, no changes with ingestion of the protein hydrolysates drinks, and a 2-fold increase with ingestion of the free glutamine drinks." However, the rate of glycogen resynthesis was not significantly different in the four tests. The researchers finished by saying that the ingestion of a glutamine/carbohydrate mixture does not increase the rate of glycogen resynthesis in muscle. The article concludes that glycogen resynthesis rates were higher, although not statistically significant, after ingestion of the drink containing the wheat and whey protein hydrolysate compared to ingestion of the control and free glutamine drinks, implying that further research is needed on the potential protein effect (2000).

Since glutamine has also been known to support the immune system after strenuous exercise bouts, many experiments have been performed to prove or disprove this statement. In a study in June 1998 performed by T. Rohde, D. Maclean & B. Pedersen examined the influence of glutamine supplementation on exercise-induced immune changes. Since had been

hypothesized that in relation to physical activity a lack of glutamine may temporarily affect the function of the immune system these researchers decided to test this hypothesis. Eight healthy male subjects performed three short periods of ergo meter bicycle exercise lasting 60, 45, and 30 min at 75 percent of their V02max separated by 2 hours of rest. The arterial plasma glutamine concentration declined from 508 plus/minus 35 before the exercise to 402 plus/minus 38 uM 2 hours after the exercise was over in the placebo trial and was maintained above pre-exercise levels in the glutamine supplementation trial. The amount of circulating lymphocytes and the phytohemagglutinin-stimulated lymphocyte response declined 2 hours after during each round of exercise, whereas the lymphocyte activated killer cell activity declined 2 hours after the third round. Glutamine supplementation in vivo, given in the described doses at the specific times did not influence these changes. This study does not appear to support the hypothesis that those features of post-exercise immune changes studied are caused by decreased plasma glutamine concentrations.

Conclusion

Although glutamine is the most abundant amino acid in human blood plasma and is stored in the skeletal muscles, the consumption of glutamine supplements has not been shown to preserve lean body mass during catabolic exercises. However, there have been a few research studies that show the benefits of glutamine supplementation on the immune system. Even though a few studies have showed these results, there are still not enough studies performed for this information to be definitive. All in all, glutamine

supplementation did not show any beneficial results of decreasing muscle catabolism.

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GINSENG SUPPLEMENTATION TO IMPROVE PHYSICAL PERFORMANCE IN HUMANS:

A BRIEF REVIEW

Wayne G. Bonkowski

School of Exercise and Sports Science, Undergraduate Student, Fitchburg State College,
Massachusetts.

November 30, 2007

ABSTRACT

Natural herbal supplementation is becoming more popular in sports supplementation throughout the world. In recent years ginseng has become more and more popular because of its potential benefits on improving physical performance. The term ginseng includes several species of the Araliaceae family and is prepared by various methods. Ginseng has been used for many years as a medicinal drug, but recent studies have uncovered its ergogenic effects of exercise performance enhancement. Ginseng found in most exercise enhancing products usually refers to the species *Panax ginseng*, also known as Chinese ginseng or Korean ginseng. This review examines the several different studies that have been done on *Panax ginseng* and its potential benefits in exercise. Most of this research has turned up mixed results and there seems to still be no clear cut answer as to whether or not ginseng really does improve physical performance. The studies listed in this review seem to be flawed in some way or another, making their conclusions somewhat invalid. But with better research designs and larger subject groups of many different activity levels, there can be a research that could potentially prove the truth behind ginseng's potential as an ergogenic aid. Researchers should also continue to experiment with different doses of ginseng as long as it is within the recommended range, as well as experiment with short duration, high power out exercises as well. It seems that most of the studies conducted so far, dealt with ginseng's effect on aerobic performance.

INTRODUCTION

Herbs are becoming more popular as ergogenic aides due to the increase in possible benefits they may have on increasing performance. One of the most studied herbs used for enhancing physical performance is known as ginseng. The term ginseng includes several species of the Araliaceac family and is prepared by various methods (2). Ginseng has been used for a long time in treatment of nervous disorders, anemia, wakefulness, shortness of breath and perspiration, forgetfulness, continuous thirst, lack of sexual desire, chronic and over fatigue, dyspepsia, heart pain, and nausea. In addition, ginseng has also been used for the prevention of the effects of aging, tiredness, headaches, amnesia, tuberculosis, diabetes, and illnesses of the liver, heart, and kidneys (1). Although there is no scientific evidence for these uses to treat and cure, ginseng has long been a natural remedy for many health issues throughout history.

Ginseng found in most exercise enhancing products usually refers to the species *Panax ginseng*, also known as Chinese ginseng or Korean ginseng (1, 2). Two other medicinal species of ginseng are also recognized. These species include *Panax japonicus* (Japanese ginseng, from India, southern China, and Japan) and *Panax quinquefolius* (American ginseng, found growing in rich woodland in the eastern and central US and Canada) (1). Ginseng is found growing in the wild and is cultivated and usually harvested after growing for 6 or 7 years. Ginseng is also available in many different forms, including whole root, root powder (white ginseng), steamed root powder (red ginseng), teas, tinctures, and standardized root extracts containing known and reproducible amounts of ginsenosides in every batch (2).

Ginsenosides refer to the main constituents of the ginseng root, which is also known as saponins. The ginsenoside content of dried roots may vary with root age, method of preservation

and season of harvest. More than a dozen of saponins have been identified. The saponins have been named ginsenosides R_x , where x is a, b1, b2, c, d, e, f, g1, g2, g3, h1, h2, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z, according to their position on thin layer chromatograms (9). The G115, marketed under the name of Ginsana is an extract of Korean ginseng that contains a standardized concentration of 13 ginsenosides. A capsule of G115 contains 100 mg of a concentrated aqueous extract of *Panax ginseng* titrated with 4% ginsenosides, which is equivalent to 500 mg of *Panax ginseng* root. This is the compound that is often used in clinical studies on the effects of ginseng (6).

As mentioned earlier, *Panax ginseng* has been used medicinally for many years. Much of the research done on the effects of ginseng and its aid in physical performance has turned up many mixed results. The purpose of this review is to summarize the research that has been done on the effects of *Panax ginseng* and physical performance.

REVIEW OF LITERATURE

In regards to benefits of *Panax ginseng* on exercise, the literature seems to have mixed results. The purported benefit of ginseng is to increase resistance to the catabolic effects of exercise, with secondary consequences of prolonged time to exhaustion with extreme exercise. The result of prolonged time to exhaustion is supposedly due to glycogen sparing and free fatty acid mobilization, activation of the hypothalamic-pituitary-adrenal axis, an increased cortisol response to strenuous exercise, protection of the immune system from stress, an enhanced muscle glycogen synthesis after exercise, and enhanced ability to sustain muscle creatine phosphate levels during strenuous exercise leading to decreased lactic acid production (10).

According to one study that looked at the supplementation of *Panax ginseng* and its effects of endurance exercise using a cycle ergometer (7), a single dose of 1,350 mg per day of

Panax ginseng supplement for 30 days extended the subjects time to exhaustion by an average of more than 7 minutes. The subjects on the ginseng supplementation also exhibited a reduction in $\dot{V}O_2$ and VE during the endurance exercise test. It should also be noted that the subjects of this study were untrained healthy adults between the ages of 20-35 years. This is important because other research has shown to have no improvement on performance when testing highly trained subjects. For example, in a study by Knapik et al. (5) comparing the influence of chronic Panax ginseng administration on indices of substrate utilization and hormone production, endurance, metabolism, and RPE during consecutive days of exhaustive exercise in humans. The study participants consisted of 5 physically fit military cadets who were compared with 6 placebo-treated cadets. The study found no significant differences between the two groups for any of the variables tested. Knapik et al. (5) concluded that Panax ginseng does not alter substrate utilization, hormone response, or performance during heavy, prolonged exercise. Unfortunately the sample size was so small that the statistical power was probably inadequate.

Another study done by Kim et al. (4), looked at the effects of Panax ginseng extract (PGE) on lipid peroxidation and scavenger enzymes induced by an acute exhaustive exercise. In this study, seven healthy sedentary male subjects performed 2 exhaustive incremental exercises on the treadmill before and after 8 weeks of PGE ingestion. Each subject was to ingest 2 grams of ginseng 3 times a day for the complete 8 weeks. During the exercise tests $\dot{V}O_2$, heart rate and exercise duration were all recorded. Blood samples were also recorded at rest, immediately after, 10, and 30 minutes following each test. These blood samples were used to measure malondialdehyde (MDA), catalase (CAT), and superoxide dismutase (SOD). The results of this experiment showed that after the 8 weeks of supplementation of 6 grams of ginseng per day, the subjects significantly increased their exercise durations by an average of about 1.5 minutes.

MDA levels were significantly elevated following both trials but was attenuated after POE administration. The results of the blood samples also showed CAT and SOD activities following exercise were significantly elevated, but the control group had much lower activities of these variables than those following the POE exercise. The results of this exercise suggest that lipid peroxidation initiated by free radicals during an acute exercise was inhibited by POE administration. Also, since the CAT and SOD activity levels immediately after the control group exercise were increased significantly, but much lower than when compared to the levels following POE exercise suggests that it is possible to declare that the amount of ginseng administered in the present study was enough to decrease oxidative damage following exercise. These findings support scientific claims that ginseng has ergogenic properties in facilitating recovery from exhaustive exercise.

On the other hand another study done by Engels et al. (3), found very different results when they tested the effects of ginseng during graded maximal aerobic exercise tests. 36 healthy men were recruited to perform this experiment. The study was conducted using a randomized, double-blinded, and placebo-controlled research design. A standardized Panax ginseng concentration (G115) was added to the normal diet of the subjects at a dosage of either 200 or 400 mg of Panax ginseng per day for 8 weeks. The standard dose of Panax ginseng recommended by the American Herbal Products Association's Botanical Safety Handbook is 0.6-3.0 grams, and this dose should be given orally 1-3 times per day (7). Each subject was assessed on submaximal and maximal exercise responses using a standard, graded maximal exercise protocol on a mechanically braked cycle ergometer. This test took place in a controlled laboratory setting and was performed before and after the 8 week period of supplementation. During the tests, oxygen consumption, respiratory exchange ratio, and minute ventilation were

all recorded. Along with blood samples before the exercise, immediately after, and 3 minutes post exercise to measure blood lactate levels. The results of this experiment were based on 31 subjects because 5 subjects were invalid due to other reasons. The primary findings of this study was that supplementation of Panax ginseng at two different dosage levels (200 and 400 mg/day of G115) failed to affect selected physiological and psychological responses during graded maximal exercise.

RESULTS AND CONCLUSIONS

In recent years more and more research has been conducted on the effects that ginseng may have on performance enhancement. Even still there has been little evidence to suggest that ginseng has a positive effect on physical performance. As shown above, the research that has been conducted is very inconsistent in its findings. This inconsistency that ginseng enhances physical performance could propose that ginseng is not really an ergogenic aid when it comes to exercise. It should also be noted that these findings could also be due to lack of care when designing the research. For example, in the first experiment listed (Liang et al.) (7), the subjects were untrained but healthy adults between the ages of 20-35 years. This experiment showed no improvement in performance, Knapik et al. used highly trained military cadets as subjects and managed to get the same results as well. This factor of subject training status can have a big effect on the results of experiment. It seems that most of the experiments found were done on normal healthy adults who were for the most part somewhat active. This leads to the conclusion that in the normal healthy adult, ginseng seems to have no real enhancement on physical performance. As mentioned earlier, inadequate research designs also play a huge factor in the results that are found. For example, in the Kim et al. (4) study, which showed an enhancement in performance during prolonged exercise was done with such a small sample size that the result

could hardly be considered as valid. It seems that the inadequateness of control groups and an inconsistency of making sure the proper variables were controlled, is what makes the general findings of these experiments so inconsistent.

RECOMMENDATIONS, SUGGESTIONS, IMPACT

Ginseng is a popular herbal remedy that has been used in eastern Asian cultures for several thousand years (6). Although it has been mostly used for its proposed medicinal powers in the past, recent studies have suggested that ginseng may also increase physical performance. After looking at several studies done on humans and the effects that ginseng has on increasing physical performance, it seems that there is still no true evidence to prove that ginseng does enhance performance. Many of the studies done were performed on endurance types of tests (5, 7, 10). There seems to be a lack of studies done on its effects during short-term anaerobic type of exercise. Studies done along these parameters may in fact provide more insight on the possible effectiveness of ginseng as a performance enhancer. But until more studies are done, on both aerobic and anaerobic testing, the current evidence is too inconclusive to yield any true enhancement by the use of ginseng. When doing future studies, researchers should also continue to be cautious with the way in which they design their experiments. All of the variables should be carefully looked at when performing these tests. Many of the experiments so far were not double-blind studies, therefore resulting in some bias with the subjects that were on the supplementation when compared to those who were in the control group. So, in conclusion, with the present evidence suggested and the inconsistent results that seem to be associated with this supplement, one should be aware of the fact that no real evidence has been shown that ginseng enhances physical performance and therefore should choose alternative means of supplementation for physical performance enhancement.

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Molly Maloney

Periodization Project

Strength Training and Conditioning

Dr. Hilliard

5/11/10

Player Profile

Sport: Women's Ice Hockey

Position: Forward

Age: 21

Height: 5'8"

Weight: 140 lb

Strength, Power, Endurance, and Flexibility are all key components to maintaining a good level of ice hockey conditioning in order to compete at the collegiate level. Ice hockey players use all major muscles especially legs, hips and arms. Legs and Hips are used with power and strength to explode across the ice and make quick coordinated turns and stops. The arms need strength in order to skillfully maneuver the puck across the ice while maintaining balance as the opposing team is constantly making contact with you. Especially for a forward, endurance is a key conditioning aspect in order to skate as fast as possible across the ice at any time and for long periods of time. Ice hockey uses type 1 and 2 muscle fibers because endurance, speed and power are all key components. This would be considered an anaerobic sport.

This specific player has a history of knee problems. She has had surgery on her ACL last season. She has been working on gaining her strength back especially in her knee and has had 3 years of resistance training experience. A lot of the lower body exercises will be done with focus on strengthening her knee. Now, she needs to work on getting her speed and agility back to where they were before. Starting with the Off season cycle, this athlete will work towards achieving her goal to gain speed and agility continuing to gain more strength in her legs and maintaining a toned upper body. In Pre-season the athlete will be performing more ice hockey specific exercises such as more skating drills to prepare for the upcoming season and continue to weight train and perform endurance exercises. She should be entering her season in October in top physical condition and ready to compete at the collegiate level again.

Dynamic stretches will be done for a warm up before each exercise training day. They are done to warm up the muscles that will be used in the workout. These exercises include heel kicks, carioca, bounding strides, forward jumps, lunges, side lunges, and backward lunges.

Static Stretches will be performed at the end of each exercise routine. These will include a cycle of full body stretches for about 10-15 minutes including hamstring, quad, arm, calf, groin, and back stretches.

Off Season: May-August

Goal: Regain strength lost from long tiring season (after active rest soresistance training should increase), conditioning (including sprint training), continue to train on ice to maintain balance and coordination along with speed and agility.

At the beginning of off season, tests should be performed to determine the training loads. Upper body exercises should be done at 40-50% 1RM to strengthen and tone, and lower body exercises should be performed at 50-60% 1RM to gain strength

May-June		
Resistance- MWF	Sprint Training- ITH	Plyometrics- W
Dynamic Stretches (warm-up)	Dynamic Stretching	Dynamic Stretching
Bench Press 4*12	200 yrd sprint *2	2-Foot Ankle Hop
Squat 3*8	100 yrd sprint*2	Squat jump
Dumbbell press 4*12	50 yrd sprint*2	Jump and Reach
Leg Curl 3*8		Double Leg Vertical jump
Dead Lift 3*8		
Tricep Extensions 4*12		
Dumbbell Curls 4*12	Bike/Jog: 45-50	
Leg Press 3*8	minutes	
Abs (crunches) 2*20		
Full Body Static Stretches- Flexibility		

The second phase of the off season cycle will include the same schedule except the reps and intensities of the resistance exercises will change to continue to increase strength and power along plyometrics to improve power. Speed will also still be incorporated into the exercise program. Cardio training will be included 2 days a week to maintain body composition and endurance. Also, Skating will be added to the workout schedule one day a week to apply speed drills.

(Off Season) June-July			
Resistance	Sprint Training/Agility-T/Th	Plyometrics/Cardio-F	Skate Training and Cardio-W
lower Body (Monday/Thursday) Monday-heavy (80% IRM) Front Squat 3*6 Dead Lift 3*6 Hip Sled 3*6 leg Curl 3*6 Step ups w. weight 3*6 Thursday-light 3*8@ (60%1RVI)	300 yd. shuttle *2 (anaerobic endurance) 200 yd. sprint *2 100yd. sprint *2 40 yd. spring *2 Hexagon *2 Pro-Agility *2 Margaria*2	Squat jumps 2*10 Box Jumps 2*12 Tuck Jumps 2*12 Bounding 2*10 Box Drill *2 Static Stretches	Sprints Puck handling drills Cardio: Bike/Run 45-50 min Static Stretches
Upper Body (Tuesday/Friday) Tuesday-heavy (75%1RM) 3*8(for each) Incline Dumbbell Press Shoulder Press Dumbbell Flys Preacher Curls Seated Row Lat Pull Down Friday-light 4*10 @60%1RM) Static Stretches-Flexibility	Static Stretches		

During the last month of Off-Season she will be performing many of the same kinds of resistance exercises but with still increasing weight to gain more power and strength, especially in the lower body. Plyometrics and cardio are performed to improve power and endurance. Also, she will be skating one day a week to incorporate speed on the ice.

Off Season: July-August Resistance	Sprint Training/ Agility- T/Th	Plyometrics/Cardio- F	Skate Training and Cardio-W
<p>lower Body (Monday/Thursday) Monday-heavy (90% 1RM) Front Squat Dead Lift Hip Sled Leg Extension Step ups w. weight Seated Heel Raise Thursday-light 3*8@ (60%1RM)</p> <p>Upper Body (Tuesday/Friday) Tuesday-heavy (85%1RM) 3*8(for each) Tricep Extensions Shoulder Press Dumbbell Flys Dumbbell Curls Seated Row Lat Pull Down Friday-light 4*10 @(60%1RM)</p> <p>Static Stretches- Flexibility</p>	<p>300 yd. shuttle *2 (anaerobic endurance) 200 yd. sprint *2 100yd. sprint *2 40 yd. spring *2 Hexagon *2 Pro-Agility *2 Margaria*2</p>	<p>Split Squat jumps 3*10 Lateral Box Jumps 2*12 Lateral Push offs 2*10 Single Leg Vertical Jumps 2*10 Bounding 2*10 Box Drill *2</p> <p>Stationary bike 40-45 mins</p>	<p>Sprints with stick Puck handling drills</p> <p>Cardia: Bike/Run 45-50 min</p> <p>Static Stretches</p>

Preseason

Goals of preseason are to incorporate more exercises that are sport specific and increase strength and power through resistance training and plyometrics. Speed and agility will be more focused to hockey specific drills. This is the last cycle of the preparatory phase which leads up to the first competition.

September-October			
Resistance- MWF	Skate Training- M/T/TH	Plyometrics- W	Cardio-W/F
Dynamic Stretches (warm-up)	Speed Drills	Death Jumps	45-50 mins
Bench Press 3*12	-sprints	2*10	Bike/ Jog
Squat 3*8	200yd	Single Leg	
Dumbbell press 3*12	100yd	Vertical Jump	
Leg Curl 3*8	50yd	2*	
Dead Lift 3*8	300 yd shuttle for	Squat Jump	
Tricep Extensions 3*12	endurance	2*10	
Dumbbell Curls 3*12		Sit up with med	
Leg Press 3*8	-Puck handling	ball	
Abs (crunches) 2*20	-All Drills done	2*15	
All lower body exercises @ 90% 1RM	with stick and pads		
Upper Body exercises @ 80% 1RM			
Static Stretches	Static Stretches	Static Stretches	Static Stretches

In Season

At the beginning of in season players should be in top physical condition and ready to compete at the collegiate level. This cycle has all practice and games scheduled. This time will be using all of the training and hard work into good use. During this time resistance training and plyometrics will be done only once a week depending on how many days a week games are scheduled. Usually there are 2 games a week, 4 practices, and 1 day of rest. Being rested and ready for games is key, therefore resistance training will be light to maintain strength but nothing that will over train the athlete. Depending on if the team makes playoffs, the season usually lasts until the beginning of March. The athlete should continue to maintain conditioning throughout games and practices and incorporate sprint training once a week to continue to improve throughout the season.

October-March		
Resistance-Monday	Sprint Training Friday	Games/Practices
Dynamic Stretches (warm-up)	200 yd *2	Practices 4 days
Bench Press 3*12	100 yd*2	Games 2 day
Squat 3*8	50 yd*2	
Dumbbell press 3*12	300 yd shuttle * 2	
Leg Curl 3*8		
Dead Lift 3*8		
Tricep Extensions 3*12		
Dumbbell Curls 3*12		
Leg Press 3*8		
Abs (crunches) 2*20		
All exercises performed at 80% Max		
Plyometrics can be alternated every other week	Static Stretches	Static Stretches
Static Stretches		

Post Season:

This cycle consists of active rest and healing the athlete's body from a rough and competitive season. The athlete should continue to do some exercise, however it will be light and less intense than before and throughout the season.

Post Season March-June MWF	Circuit training: TH	Flexibility
Recreational Activities Jogging/Biking/ Swimming: 3-4 days a week Low Intensity at about 50-60% for 35-45 mins	Abs: 15 mins Upper Body:15 mins Lower Body:15 mins	Dynamic Exercises Before training and static stretches after training

Joseph Daigle

Strength & Conditioning

Dr. Hilliard

12 May, 2010

Soccer training program

A 20 year old midfielder has just finished his junior season of college soccer, and is looking to improve his overall play in regards to enhancing all of the ingredients that go into making a soccer player. The sport of soccer takes a very complicated combination of skill, endurance, and strength to achieve maximum output, and the soccer player that we are observing has a pretty good combination of the three, after playing soccer for 15 years of his life. Soccer players must perform with short bursts of power and speed AND have the ability to keep going for 90 minutes or more. With such a high experience level, it leaves little/few limitations when attempting to construct a training program to help to improve his performance. In attempts to create a complete training program, first we must break up the training into segments that are appropriate for the sport. The first segment includes the post-season, which takes place during the first two weeks directly prior to the end of the fall soccer season. Following the post-season, is the training segment labeled as out-of-season. The out-of-season time period takes place during the following 6 months after the post-season is over, leading up to the pre-season. Pre-season takes place after the out-of-season training segment and generally makes up a three month period prior to the start of the season. The final segment of training for a 20 year old soccer player would take place while the season is actually going on, which usually lasts between two and three months.

The first training segment for the 20 year old soccer player is the post season, which takes place directly previous to the conclusion of the season and starts on Nov. 1st. This segment is two weeks long and should mostly consist of rest, in order to allow the body to recover from a long and draining season. As well as a lot of rest, the athlete should still try to maintain fitness and get a couple of runs in prior to the start of the out of season training segment.

POST-SEASON TRAINING SEGMENT (week 1-2)

Strength Training: 0 x per week

Plyometrics Training: 0 x per week

Aerobic Conditioning (low Intensity): 1x per week

Example:

2 mile run {Goal 20 minutes}

Following the post-season rest and training segment comes the out-of-season training segment. During this period, emphasis should be placed mostly on gaining strength and speed for the upcoming season. To accomplish this we will incorporate plyometrics, weight lifting, and anaerobic and aerobic conditioning into this segment of training. For the first 4 weeks of the out-of-season training segment, easy to achieve plyometrics will be practiced, as well as early stages of overall strength training. Because fitness is such an important component of soccer, we will still dedicate some days strictly to fitness even though at this juncture of the soccer training season, it isn't quite as important or necessary as gaining speed and strength is. The out-of-season training segment covers a 6 month period following the post-season. During the out-of-season training segment, workouts will gradually become harder and more intense in hopes of reaching peak of speed, conditioning, and strength just prior to the start of the season. The workouts will be broken up into six separate, one month training programs, in hopes of

reducing muscle complacency and achieving maximum strength and speed. The athlete will perform the same weekly routine of exercise for periods of 4 weeks, and following the 4 week section will begin a new training regimen. Each training day should also include a 10-15 minute warm-up using dynamic stretching, periods of work with the ball, to maintain skill level, and core strength training.

Strength Training Section:

Upper and lower body strength are each very important parts of maximizing a player's soccer abilities, because they provide the ability to protect the ball, as well as providing greater balance. The strength training program is broken up into two parts for the upper and lower body. Training should follow the 2x per week schedule. For upper body training the starting weight for each exercise should be determined by finding the maximum one repetition lift you can achieve, and then use 75-80% of the maximum to set your starting weight for sets. So if your maximum bench press is 100 pounds then you would start off week 1 using 75-80 pounds for 10 repetitions and do two sets of 10 reps. Be at a level where you can perform all the required repetitions with perfect form. Increase weight only when your form is perfect and you can still perform the desired amount of repetitions, since you will not achieve the desired strengthening effect and injury can result.

Lower strength training should be started and approached in the same manner that upper body training was. Find your maximum one repetition lift for each exercise and apply a 75-80% repetition level, for each of the beginning sets.

Upper and lower body strength training can be done on the same days, but shouldn't be done on the same days that plyometrics are. Plyometrics should be done on their own separate days allowing maximum energy output for the plyometrics. Anaerobic and aerobic conditioning can be done on the same days, and can possibly be on the same days as strength training.

Upper Body: Day 1

<u>Workout</u>	Pet{%} max	Reps	Sets
<u>Bench Press</u>	75-80%	8-10	3

<u>Incline Press</u>	75-80%	8-10	3
<u>Flat Dumbbell</u> fly	75-80%	8-10	3
Lying Barbell <u>triceps ext.</u>	75-80%	8-10	3
Dips	100%	U.E.	3
Triceps press- down	75-80%	8-10	3

U.E. = until exhaustion

Upper Body: Day 2

Workout	Pet {%}max	Reps	Sets
<u>Seated Row</u>	75-80%	8-10	3
<u>Preacher Curl</u>	75-80%	8-10	3
<u>Hammer Curl</u>	75-80%	8-10	3
Upright Row	75-80%	8-10	3
<u>Shoulder Press</u>	75-80%	8-10	3

Lower Body

Workout	Pet (%)max	Reps	Sets
<u>Hip Sled</u>	75-80%	8-10	3
Back Squat	75-80%	8-10	3
Leg Extension	75-80%	8-10	3
Leg Curl	75-80%	8-10	3
<u>Calf Raises</u>	75-80%	8-10	3

Plyometrics Training

This training should be included 2 days per week on different days from strength training. Begin by doing 60 total contacts per session to start and increase the number of contacts to 100-120 as strength and experience increases. Some other ways to improve the intensity of the plyometrics include:

Points of Contact-The ground reaction force during single-leg lower body plyometric drills places more stress on an extremity's muscles, connective tissues, and joints than during double-leg plyometric drills.

Speed- Greater speed increases the intensity of the drill.

Height of Drill- The higher the body's center of gravity, the greater the force on landing.

Body Weight- The greater the athlete's body weight, the more stress is placed on muscles, connective tissues, and joints. External weight (in the form of weight vests, ankle weights, and wrist weights) can be added to the body to increase a drill's intensity.

Low Intensity Plyometric drills to choose from-

- Two-foot ankle hop
- Squat jump
- Jump and reach
- Double-leg ^{vul-}t jump
- Power skip

Medium Intensity Plyometric drills to choose from-

- Lateral barrier hop
- Jump over barrier
- Split squat jump
- Double-leg tuck jump
- Lateral box jump

High Intensity Plyometric drills to choose from-

- Depth Jump
- Double-leg zigzag hop
- Single-leg hop
- Single-leg tuckjump
- Cycled split squat jump

OUT-OF-SEASON TRAINING SEGMENT (month 1)

Strength Training (Moderate Intensity): 2 x per week
See examples in the Strength Training Section

Plyometrics Training (Low Intensity): 2 x per week
See examples in the Plyometric Training Section

Aerobic Conditioning (Low Intensity): 1 x per week
Example:
2 mile run (Goal 19 minutes)

OUT-OF-SEASON TRAINING SEGMENT (month 2)

Strength Training (High Intensity): 2 x per week

See examples in the Strength Training Section

Plyometrics Training (Low Intensity): 2 x per week

See examples in the Plyometric Training Section

Aerobic Conditioning (Low Intensity): 1 x per week

Example:

2 mile run {Goal 18 minutes}

OUT-OF-SEASON TRAINING SEGMENT (month 3)

Strength Training (High Intensity): 2 x per week

See examples in the Strength Training Section

Plyometrics Training (Low Intensity): 2 x per week

See examples in the Plyometric Training Section

Aerobic Conditioning (Low Intensity): 1 x per week

Example:

2 mile run {Goal 17 minutes}

OUT-OF-SEASON TRAINING SEGMENT (month 4)

Strength Training (High Intensity): 2 x per week

See examples in the Strength Training Section

Plyometrics Training (Moderate Intensity): 2 x per week

See examples in the Plyometric Training Section

Aerobic Conditioning (Moderate Intensity): 2 x per week

Example:

2-4 mile run (Goal 16-32 minutes)

OUT-OF-SEASON TRAINING SEGMENT (month 5)

Strength Training (High Intensity): 2 x per week

See examples in the Strength Training Section

Plyometrics Training (Moderate Intensity): 2 x per week

See examples in the Plyometric Training Section

Aerobic Conditioning (Moderate Intensity): 2 x per week

Example:

2-4 mile run (Goal 16-32 minutes)

Anaerobic Conditioning (Moderate Intensity): 2 x per week

Example:

3 sets: 50 yard wind sprints until exhaustion

5-10 minute rest period between sets

OUT-OF-SEASON TRAINING SEGMENT (month 6)

Strength Training (High Intensity): 2 x per week

See examples in the Strength Training Section

Plyometrics Training (Moderate/High Intensity): 2 x per week

See examples in the Plyometric Training Section

Aerobic Conditioning (Moderate Intensity): 2 x per week

Example:

2-4 mile run (Goal 16-32 minutes)

Anaerobic Conditioning (Moderate Intensity): 2 x per week

Example:

5 sets: 50 yard wind sprints until exhaustion

5-10 minute rest period between sets

Following the out-of-season training segment is the pre-season training segment. The pre-season training segment takes place three months prior to the start of the season. For these three months it becomes increasingly important to extract the most gains from your training. The goal is to be

in peak condition involving strength and endurance, directly starting the season, thus making the pre-season training segment the most intense. It has been found that maximal strength gains come from maximum repetitions between 3-5, so during this period we will follow the same lifting exercises, just with higher intensity. As well as increasing the intensity of weight lifting we will also increase the intensity of plyometrics, aerobic endurance, and anaerobic endurance. The preseason training segment will be broken down into three, month long sub-segments. The intensity will increase each month.

Upper Body: Day 1

<u>Workout</u>	Pet(%) max	Reps	Sets
<u>Bench Press</u>	87-93%	3-5	3
<u>Incline Press</u>	87-93%	3-5	3
Flat Dumbbell fly	87-93%	3-5	3
<u>Lying Barbell triceps ext.</u>	87-93%	3-5	3
Dips	100%	U.E.	3
Triceps press-down	87-93%	3-5	3

U.E.=until exhaustion

Upper Body: Day 2

Workout	Pet {%)max	Reps	Sets
<u>Seated Row</u>	87-93%	3-5	3
<u>Preacher Curl</u>	87-93%	3-5	3
<u>Hammer Curl</u>	87-93%	3-5	3
<u>Upright Row</u>	87-93%	3-5	3
<u>Shoulder Press</u>	87-93%	3-5	3

Lower Body

Workout	Pet {%)max	Reps	Sets
<u>Hip Sled</u>	87-93%	3-5	3
Back Squat	87-93%	3-5	3
Leg Extension	87-93%	3-5	3
<u>Leg Curl</u>	87-93%	3-5	3
<u>Calf Raises</u>	87-93%	3-5	3

PRE-SEASON TRAINING SEGMENT (month 1)

Strength Training (Very High Intensity): 2 x per week
See examples in the Strength Training Section

Plyometrics Training (Medium Intensity): 2 x per week
See examples in the Plyometric Training Section

Aerobic Conditioning (High Intensity): 2 x per week
Example:
3-5 mile run (Goal 19-33 minutes)

Anaerobic Conditioning (Moderate Intensity): 2 x per week
Example:
3 sets: 300 meter shuttle
10-15 minute rest period between sets

PRE-SEASON TRAINING SEGMENT (month 2)

Strength Training (Very High Intensity): 2 x per week
See examples in the Strength Training Section

Plyometrics Training (Medium/High Intensity): 2 x per week
See 'medium and high intensity' examples in the Plyometrics section

Aerobic Conditioning (High Intensity): 2 x per week
Example:
2 mile run (Goal 12.5 minutes)
4-5 mile run (Goal 28-35 minutes)

Anaerobic Conditioning (High Intensity): 2 x per week
Example:
10 sets: 100 yard wind sprints until exhaustion
5-10 minute rest period between sets

PRE-SEASON TRAINING SEGMENT (month 3)

Strength Training (Very High Intensity): 2 x per week
See examples in the Strength Training Section

Plyometrics Training (High Intensity): 2 x per week
See 'high intensity' examples in the Plyometrics section

Aerobic Conditioning (High Intensity): 1 x per week

Example:

2 mile run (Goal 12 minutes)

5 mile run (Goal 32 minutes)

Anaerobic Conditioning (High Intensity): 2 x per week

Example:

50 yard suicides (5 sets)

12 sets: 100 yard wind sprints until exhaustion

In-Season Training

Following the pre-season training segment is the in-season training segment. The goal here is to maintain the fitness you developed during pre season. Regular, competitive matches maintain basic levels of endurance so any additional soccer training should concentrate on speed, power and anaerobic endurance development. At the college, we practice 4 times a week and have games 2 times a week, leaving little spare time to continue strength, aerobic, anaerobic, and plyometric training other than which is done at practice. Since, the goal is simply to maintain, we will strength train, plyometric train, and aerobically train less often and less intense.

Upper Body: Day 1

<u>Workout</u>	Pet{%} max	Reps	Sets
<u>Bench Press</u>	75-80%	8-10	2
<u>Incline Press</u>	75-80%	8-10	2
Flat Dumbbell fly	75-80%	8-10	2

<u>Lying Barbell triceps ext.</u>	75-80%	8-10	2
Dips	100%	U.E.	2
Triceps press-down	75-80%	8-10	2

U.E. = until exhaustion

Upper Body: Day 2

Workout	Pet {%}max	Reps	Sets
<u>Seated Row</u>	75-80%	8-10	2
<u>Preacher Curl</u>	75-80%	8-10	2
<u>Hammer Curl</u>	75-80%	8-10	2
<u>Upright Row</u>	75-80%	8-10	2
<u>Shoulder Press</u>	75-80%	8-10	2

Lower Body

Workout	Pet { }max	Reps	Sets
<u>Hip Sled</u>	75-80%	8-10	2
Back Squat	75-80%	8-10	2
Leg Extension	75-80%	8-10	2
Leg Curl	75-80%	8-10	2
<u>Calf Raises</u>	75-80%	8-10	2

IN-SEASON TRAINING SEGMENT (month 1)

Strength Training (Moderate Intensity): 2 x per week
See examples in the Strength Training Section

Plyometrics Training (Low Intensity): 1 x per week
See examples in the Plyometric Training Section

Aerobic Conditioning (Low Intensity): 1 x per week
Example:
2 mile run (Goal 16 minutes)

Anaerobic Conditioning (No Intensity): 0 x per week

IN-SEASON TRAINING SEGMENT (month 2)

Strength Training (Moderate Intensity): 2 x per week
See examples in the Strength Training Section

Plyometrics Training (Low Intensity): 1 x per week
See examples in the Plyometric Training Section

Aerobic Conditioning (Low Intensity): 1x per week

Example:

2-3 mile run (Goal 16-24 minutes)

Anaerobic Conditioning (No Intensity): 0 x per week

This concludes the full year periodization for a male college soccer player; hopefully it will allow the player to reach new heights in the game of soccer that he never thought possible.

(attached is the 'how to' for each plyometric drill)

TWO-FOOT ANKLE HOP

Intensity level: Low

Direction of jump: Vertical

Starting position: Get into a comfortable, upright stance with feet shoulder-width apart.

Arm action: None or double arm

Preparatory movement: Begin with a slight countermovement.

Upward movement: Hop up, with primary motion at the ankle joint.

Downward movement: Land in the starting position and immediately repeat hop.

Note: This drill should be performed with little horizontal (forward or backward) or lateral movement.



SQUAT JUMP

Intensity level: Low *Direction*

of jump: Vertical *Starting position:*

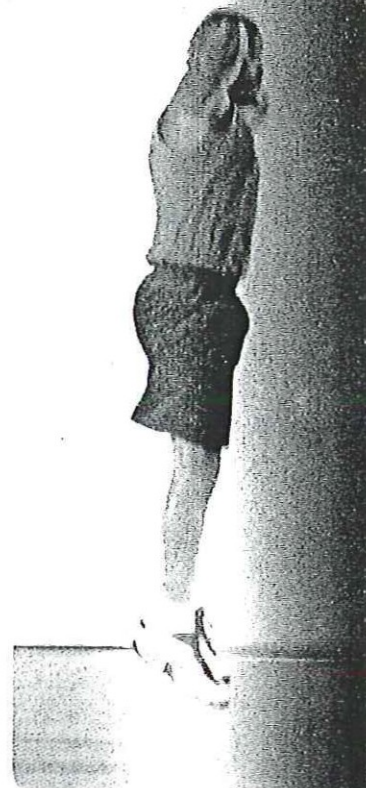
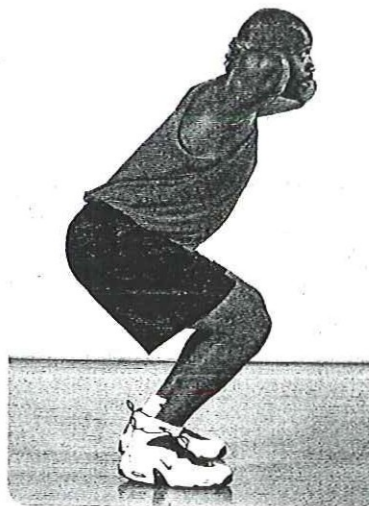
Get into a squat position (thighs slightly above parallel with the ground) with feet shoulder-width apart. Interlock fingers and place hands behind head.

Arm action: None *Preparatory*

movement: None *Upward*

movement: Explosively jump up to a maximum height.

Downward movement: Land in the squat position and immediately repeat the jump.



JUMP AND REACH

Intensity level: Low

Direction of jump: Vertical

Starting position: Get into a comfortable, upright stance with feet shoulder-width apart.

Arm action: Double arm with reach at top of jump

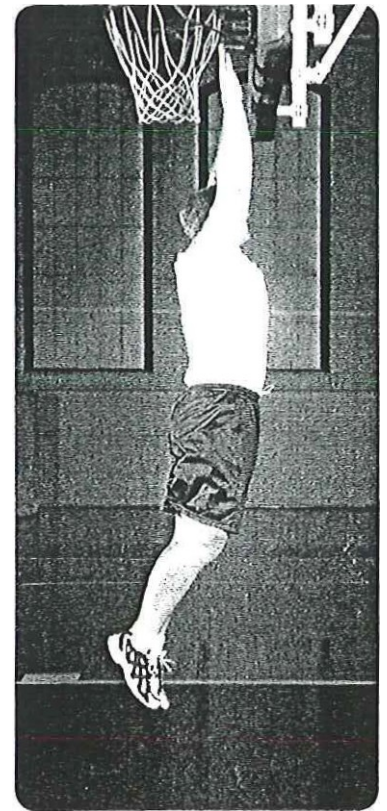
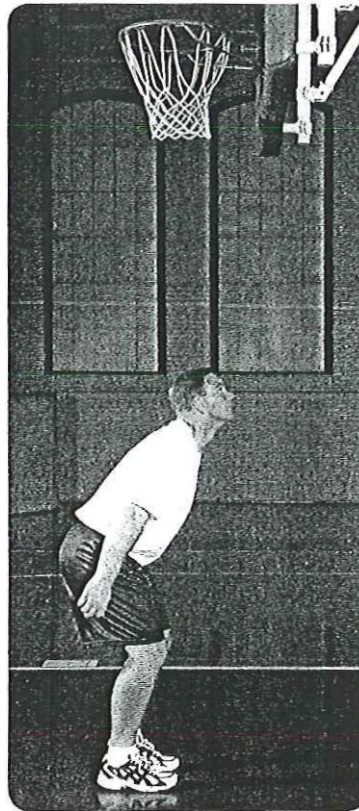
Preparatory movement: Begin with a countermovement.

Upward movement: Explosively jump up and reach for an object or target.

Downward movement: Land in starting position and immediately repeat jump.

Note: Emphasis is on vertical height with minimal delay between jumps.

Note: This drill should be performed with little horizontal (forward or backward) or lateral movement.



DOUBLE-LEG TUCK JUMP

Intensity level: Medium

Direction of jump: Vertical

Starting position: Get into a comfortable, upright stance with feet shoulder-width apart.

Arm action: Double arm

Preparatory movement: Begin with a countermovement.

Upward movement: Explosively jump up. Pull the knees to the chest, quickly grasp the knees with both hands, and release before landing.

Downward movement: Land in the starting position and immediately repeat the jump.



DOUBLE-LEG VERTICAL JUMP

Intensity level: Low

Direction of jump: Vertical

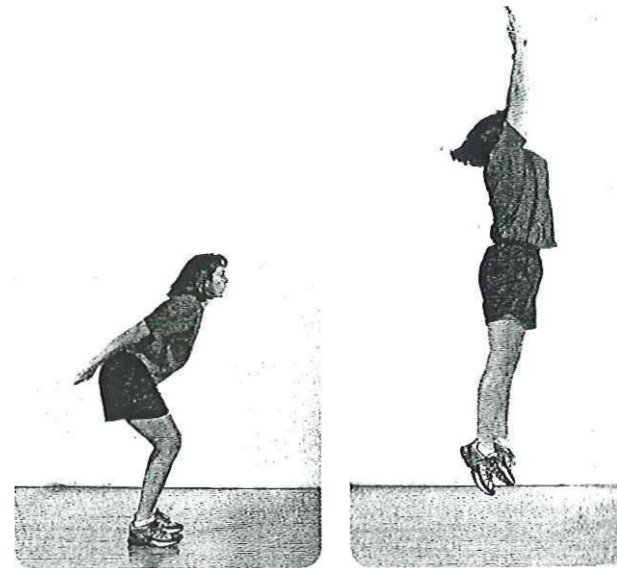
Starting position: Get into a comfortable, upright stance with feet shoulder-width apart.

Arm action: Double arm

Preparatory movement: Begin with a countermovement.

Upward movement: Explosively jump up, using both arms to assist, and reach for a target.

Downward movement: Land in the starting position and repeat the jump. Allow recovery time between jumps.



JUMP OVER BARRIER

Intensity level: Medium

Direction of jump: Horizontal and vertical

Equipment: A barrier such as a cone or hurdle

Starting position: Get into a comfortable, upright stance with feet shoulder-width apart.

Arm action: Double arm

Preparatory movement: Begin with a countermovement.

Upward movement: Jump over a barrier with both legs, using primarily hip and knee flexion to clear the barrier. Keep the knees and feet together without lateral deviation.

Downward movement: Land in the starting position and repeat the jump. Allow recovery time between jumps.

Note: The height of the barrier should be progressively increased (e.g., from a cone to a hurdle).



Multiple Hops and Jumps

DOUBLE-LEG HOP

Intensity level: Medium

Direction of movement: Horizontal and vertical

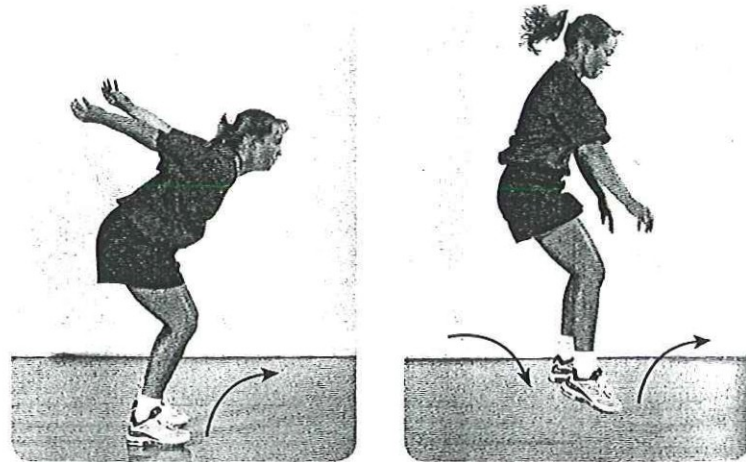
Starting position: Get into a comfortable, upright stance with feet shoulder-width apart.

Arm action: Double arm

Preparatory movement: Begin with a countermovement.

Upward movement: Jump as far forward as possible.

Downward movement: Land in the starting position and immediately repeat the hop.



DOUBLE-LEG ZIGZAG HOP

Intensity level: High

Direction of movement: Diagonal

Equipment: Place about 10 hurdles 18 to 24 inches (45-60 cm) apart in a zigzag pattern.

Starting position: Get into a comfortable, upright stance with feet shoulder-width apart. Stand on the outside of the first hurdle. Elbows should be flexed at 90° and held at the sides of the body.

Arm action: Double arm

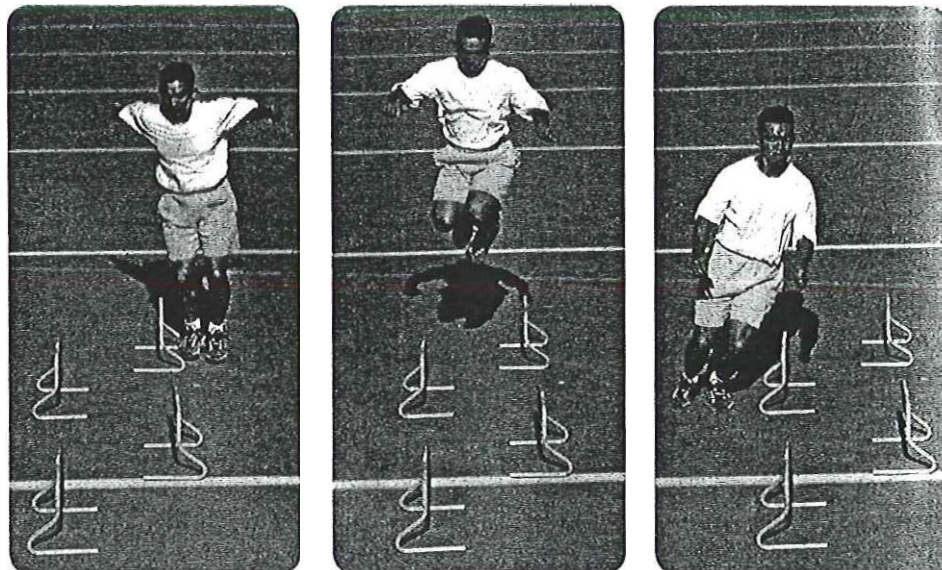
Preparatory movement: Begin with a countermovement.

Upward movement: Jump from the outside of the first hurdle to the outside of the second hurdle, keeping the shoulders perpendicular to an imaginary line through the center of all hurdles.

Downward movement: Immediately upon landing on the outside of the second hurdle, change direction and jump diagonally over the second hurdle to the outside of the third hurdle.

Continue hopping over all the hurdles.

Note: For a less intense version of this drill, set the hurdles in a straight line and hop over one hurdle at a time. Intensity of the zigzag hop can be increased by performing the hops with one leg only.



Multiple Hops and Jumps (CONTINUED)

SINGLE LEG HOP

Intensity level: High

Direction of jump: Horizontal and vertical

Starting position: Get into a comfortable, upright stance on one foot. The nonjumping leg is held in a stationary position with the knee flexed during the exercise.

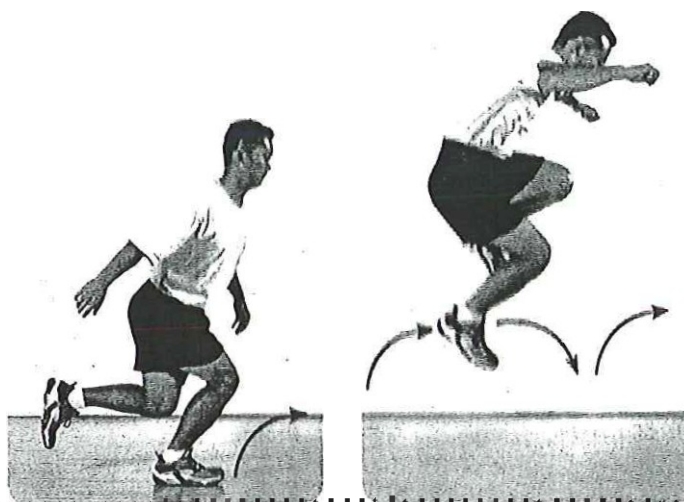
Arm action: Double arm

Preparatory movement: Begin with a countermovement.

Upward movement: Explosively jump forward, using both arms to assist.

1. The athlete starts in a crouched position with the nonjumping leg held in a stationary position with the knee flexed during the exercise.

2. The athlete jumps forward, using both arms to assist.



FRONT BARRIER HOP

Intensity level: Medium

Direction of jump: Horizontal and vertical

Equipment: Two barriers such as two cones or two hurdles

Starting position: Facing the first barrier, get into a comfortable, upright stance with feet shoulder-width apart.

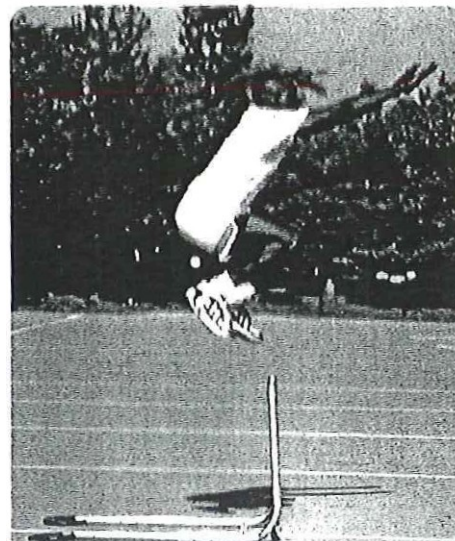
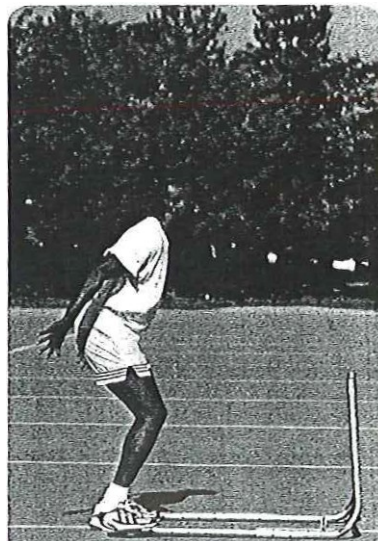
Arm action: Double arm

Preparatory movement: Begin with a countermovement.

Upward movement: Jump over the first barrier with both legs, using primarily hip and knee flexion to clear the barrier. Keep the knees and feet together without lateral deviation.

Downward movement: Land in the starting position and immediately repeat the jump over a second barrier.

Note: The front barrier hop can be performed progressively by increasing the distance between the barriers (e.g., from 10 to 20 feet) or by increasing the height of the barriers.



LATERAL BARRIER HOP

Intensity level: Medium

Direction of jump: Lateral and vertical

Equipment: A barrier such as a cone or hurdle

Starting position: With the barrier to one side, get into a comfortable, upright stance with feet shoulder-width apart.

Arm action: Double arm

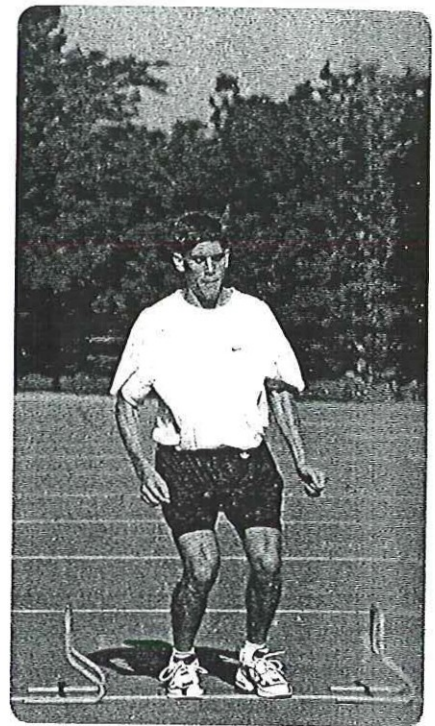
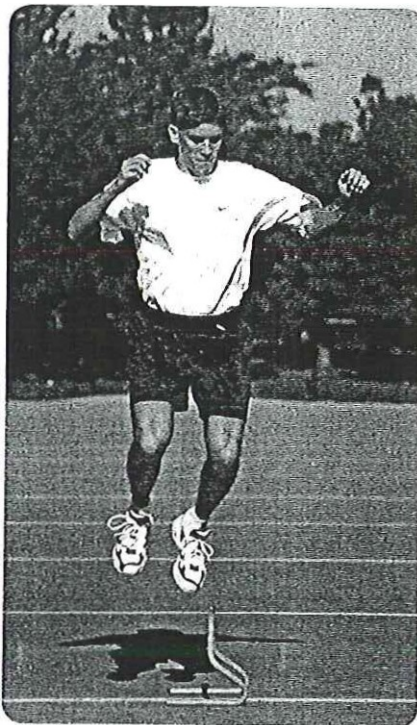
Preparatory movement: Begin with a countermovement.

Upward movement: Jump over the barrier with both legs, using primarily hip and knee flexion

to clear the barrier. Keep the knees and feet together.

Downward movement: Land on the opposite side of the barrier and immediately repeat the jump to the starting side.

Note: Intensity level of the lateral barrier hop can be increased from medium to high by progressively increasing the height of the barrier (e.g., from a cone to a hurdle) or by performing the hops with one leg only.



LATERAL BOX JUMP

Intensity level: Medium

Direction of jump: Vertical and slightly horizontal

Equipment: Plyometric box, 6 to 42 inches (15-107 cm) high

Starting position: Stand to one side of the plyometric box; get into a comfortable, upright stance with feet shoulder-width apart.

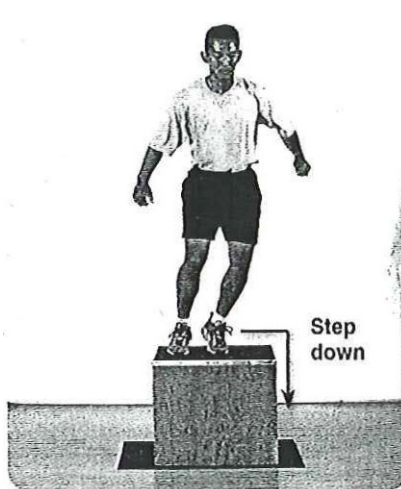
Arm action: Double arm

Preparation: Stand to one side of the plyometric box with feet shoulder-width apart.

Jump: Jump laterally over the top of the box with both feet.

Downward movement: Land on both feet in a half squat position, step down from the box, and return to the starting position.

Note: Intensity may be increased by increasing the height of the box. Use a height of 6 inches (15 cm).



JUMP FROM BOX

Intensity level: Medium

Direction of jump: Vertical

Equipment: Plyometric box, 12 to 42 inches (30-107 cm) high

Starting position: Get into a comfortable, upright stance with feet shoulder-width apart on the plyometric box; toes should be near the edge of the box.

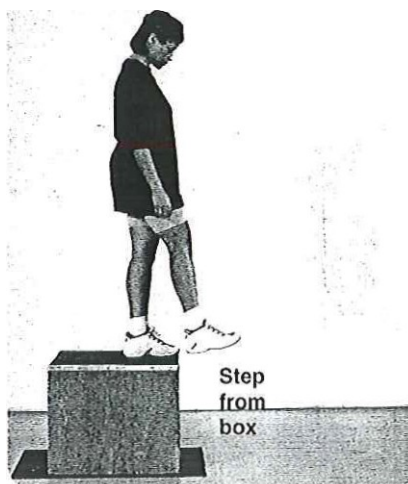
Arm action: None

Preparatory movement: Step from box.

Downward movement: Land on the floor with both feet, quickly absorbing the impact upon landing.

Step back onto the box and repeat.

Note: Intensity may be increased by increasing the height of the box. Use a height of 12 inches (30 cm).



DEPTH JUMP

Intensity level: High

Direction of jump: Vertical

Equipment: Plyometric box, 12 to 42 inches (30-107 cm) high

Starting position: Get into a comfortable, upright stance with feet shoulder-width apart on the plyometric box; toes should be near the edge of the box.

Arm action: Double arm

Preparatory movement: Step from box.

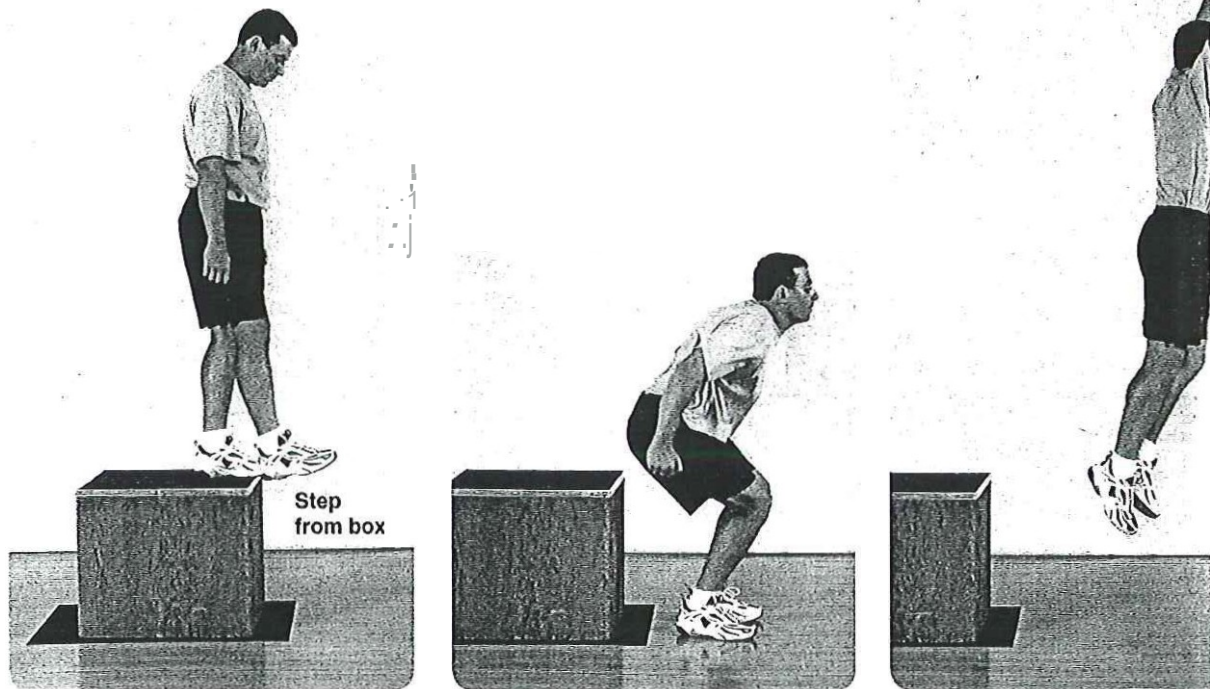
Downward movement: Land on the floor with both feet.

Upward movement: Upon landing, immediately jump up as high as possible.

Note: When stepping from the box, step straight out. Do not first jump up or lower your body to gravity as you step down, as these adjustments will change the height from which the exercise is performed.

Note: Time on the ground should be kept to a minimum. Intensity may be increased by increasing the height of the box. Begin with height of 12 inches (30 cm).

Note: Upon landing, emphasis should be on jumping up, with minimal horizontal movement. The far right photo shows too much forward movement.



SINGLE-LEG TUCK JUMP

Intensity level: High

Direction of jump: Vertical

Starting position: Get into a comfortable, upright stance on one foot. The nonjumping leg is held in a stationary position with the knee flexed during the exercise.

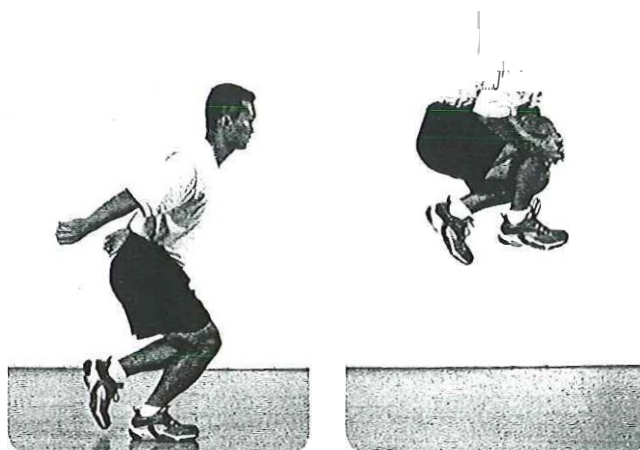
Arm action: Double arm

Preparatory movement: Begin with a countermovement.

Upward movement: Explosively jump up. Pull the knee of the jumping leg to the chest, grasp the knee with both hands, and release before landing.

Downward movement: Land in the starting position and immediately repeat the jump using the same leg.

Repeat with the opposite leg after a brief rest.



PIKE JUMP

Intensity level: High

Direction of jump: Vertical

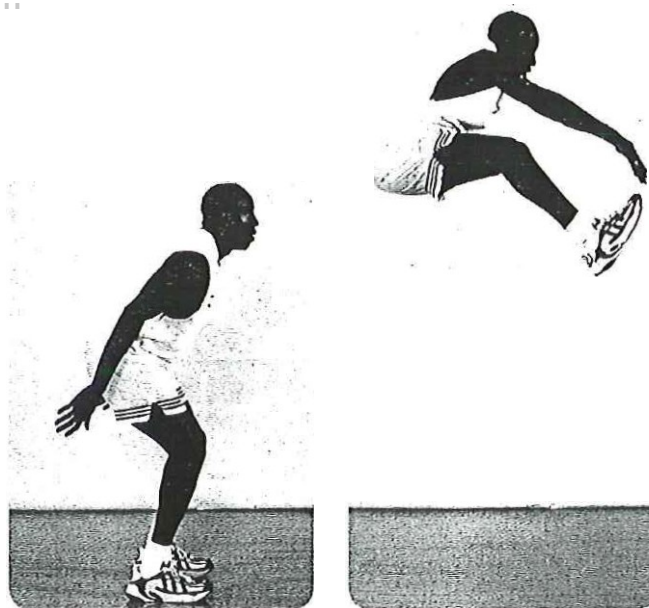
Starting position: Get into a comfortable, upright stance with feet shoulder-width apart.

Arm action: Double arm

Preparatory movement: Begin with a countermovement.

Upward movement: Explosively jump up. Keeping the legs straight and together, try to lift them to the front and try to touch the toes with the hands.

Downward movement: Land in the starting position and immediately repeat the jump.



Fitchburg State University Exercise and
Sport Science Department Internship

Learning Contract

Student Intern Name: Molly Maloney

Intern Site: Health Alliance Hospital Burbank Out Patient Site

Site Address: 275 Nichols Rd Fitchburg, MA 01420

Site Supervisor Name: Paul Koval Phone: 978-343-5156

Internship dates: Beginning: 1/27/11 Ending: *stifr/11*

Compensation: \$0

I. Job Description

I will be an intern at the Health Alliance Hospital at the Burbank outpatient Physical Therapy site. Here I will assist the Physical Therapist with any duties that I may be assigned, and I will observe many aspects of the field through my mentor.

Roles and Responsibilities

My primary roles will be to assist my mentor, Christine Hastings in providing patient care to improve their mobility, relieve pain, and prevent disabilities. I will take on any duties and responsibilities that may be assigned to me with a professional and positive attitude to ensure a successful outcome. Part of my philosophy of Physical Therapy is to be enthusiastic about rehab to help motivate the patient to rehab successfully. I will take on this role to help motivate and encourage the patients to reach their rehab goals.

My responsibilities will include following the site rules and regulations including privacy terms and limitations that I may have with patient contact. I will be on time and prepared each day that I arrive at the site. I will follow the instructions of my mentor in order to properly assist her in rehabbing patients. The most important

responsibility will be to follow the safety regulations of the site to ensure a safe environment for the patients and to properly rehab the patient.

II. Learning Objectives

A. Academic

I want to learn about skills and strategies used as a Physical Therapist in rehabbing patients. I hope to gain more knowledge of the field and the daily routine of a Physical Therapist. I want to learn the medical terms and equipment that I will use as a Physical Therapist. I hope to learn more about which exercises would be used to rehab certain injuries and which exercises to avoid for certain injuries or certain people. I want to learn how to react to certain situations and how to adapt to different patient needs, as I realize there will be a variety of patients in the facility. Also, I want to have the knowledge of how to react in emergency situations. I hope to get an idea of what other courses may be necessary to further my education, and which programs may be best suitable for me.

I plan to observe very carefully to what the Physical Therapist does and provide any help that I can to assist the Physical Therapist and the patients. I will ask any questions that I have about skills strategies and about furthering my education.

B. Professional Development

I hope to learn a lot about the professionalism of Physical Therapist, and what professional characteristics are important to be successful in this field. I hope to learn communication skills between my co-workers and the patients. I hope to learn how to react to certain situations in a professional manner.

My goal is to continue my education in this field through graduate school and earn a Doctorate in Physical Therapy. This internship will provide me with great professional experience and put me on the right track to my career goals.

I plan on observing the Physical Therapist and how they communicate and deal with different situations as a professional. I will concentrate on how they take on their everyday tasks to be successful and I will ask any questions that I have concerning professionalism and what things I can do to reach my professional goals.

C. Personal Development

My personal development goals include improving my communication and motivational skills in order to be a successful Physical Therapist. I hope to learn the ethics of the career and to strive for excellence in every aspect of this field and in my personal life. I hope to build confidence in my skills to gain patients trust in order to help them rehab successfully. Other personal skills such as patience and adapting to different patients will be practiced and improved through this internship.

I will observe the personal skills of my mentor and what strategies she uses to interact with patients and co-workers. I will ask questions on how she practiced her personal skills and any suggestions that she may have to better my performance.

D. Job Hunting Goals

Through my experience with Health Alliance Hospital I hope to learn strategies in job hunting. My goals are to eventually find a site where I can be a successful Physical Therapist. I hope to use this experience to find a population in which I would want to work with. I plan to talk to many Physical Therapists to see what their experiences have been in this field and what suggestions they have to set me on the right path when finding a job that best suits me. I will also ask many questions regarding my evaluating to see what skills I may need to improve to better my chances as a successful Physical Therapist. I plan to take all the

strategies that I will learn in this internship and apply it to my goals that I hope to reach after graduation.

Site Supervisor Signature:

Faculty Advisor Signature:

Internship Time Sheets

PT PLUS

Health Alliance Hospital: Outpatient Physical Therapy@ Burbank Campus

Date	Hours	Total Hours	Signature of Supervisor
Week 1			
Tuesday 2/15/11	8:30am-2:30pm	6	<i>{tt-4 ,Ck:Jr'r</i>
Thursday 2/17/11	8:30am-2:30pm	6	<i>;fy- -</i>
Friday 2/18/11	8:30am-2:30pm	6	<i>* Ck, r</i>
Week2			
Tuesday 2/22/11	8:30am-2:30pm	6	<i>C0 -</i>
Thursday 2/24/11	8:30am-2:30pm	6	<i>G t-</i>
Friday 2/25/11	8:30am-2:30pm	6	<i>* Od!'.-</i>
Week3			
Tuesday 3//1/11	8:30am-4:30pm	8	<i>G IJ_".</i>



<div> <div>3/3/11</div> <div>11:00am-5:00pm</div> <div>6</div> </div>			<div> <div></div> <div>G_{eff}</div> </div>
3/4/11	8:30am -2:30pm	6	<div> <div>*</div> <div>$G_{\text{eff}}^{(1)}$</div> </div>
<div> <div></div> <div>l_{eff}</div> </div>			

Molly Maloney

Internship Time Sheets

PT PLUS

Health Alliance Hospital: Outpatient Physical Therapy@ Burbank Campus

Date	Hours	Total Hours	Signature of Supervisor
Week4			
Tuesday 3/8/11	8:30am-4 pm	8	* 
Week5			
Tuesday 3/22/11	8:30am-4pm	8	
Thursday 3/24/11	8:30am-4pm	8	
Friday 3/25/11	8:00am-2:30pm	6.5	* 
Week6			
Tuesday 3/29/11	8:60am-4:00pm	8	
3/31/11	7:00am-3:00pm	8	

4/1/11	8:00am-2:30pm	6.5	* (ijt,y./7,r
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Molly Maloney

Internship Time Sheets

PT PLUS

Health Alliance Hospital: Outpatient Physical Therapy@ Burbank Campus

Date	Hours	Total Hours	Signature of Supervisor
Week 7			
Monday 4/4/11	10:00am-2:00pm	4	
Tuesday 4/5/11	7:00am-5:00pm	10	
Thursday 4/7/11	7:00am-5:00pm	10	
Friday 4/8/11	7:00am-3:00pm	8	* <i>C.I r</i>
vWeek 8			
Tuesday 4/12/11	7:00am-5:00pm	10	
Thursday 4/14/11	7:00am-5:00pm	10	
Friday 4/15/11	7:00am-3:00pm	8	* <i>C/?/----lj</i>

Week 9			
Tuesday 4/19/11	7:00am-7:00pm	12	
4/20/11	10:00am-4:00pm	6	* <i>/---i</i>
Week 10			
Tuesday 4/26/11	7:00am-5:00pm	10	
Thursday 4/28/11	7:00am-5:00pm	10	
Friday 4/29/11	7:00am-3:00pm	8	* <i>c, _ _</i>
Week 11			
Monday 5/2/11	10:00am-3:00pm	5	
Tuesday 5/3/11	7:00am-5:00pm	10	
Wednesday 5/4/11	10:00am-3:00pm	5	
Thursday 5/5/11	8:00am-1:00pm	5	* <i>(_/?,.,-ft., r</i>

As previously stated, although this was mainly observational work, Mally always kept herself busy with work-related tasks, helping out the therapists as much as possible. She was also helping to supply patients with appropriate equipment and making sure that the equipment was in good working order. Mally was able to utilize her research background to answer questions from the therapists and patients. "Continually, we were

IV. **Interpersonal Relations:** Did the student get along well with others? Employees? Subjects/clients? Was the student a "team" member? Was the student able to communicate effectively? Did the student understand the goals, philosophy & purpose of the agency and work to fulfill that mission?

Molly's interpersonal skills were a definite strength of hers. Molly had an excellent ability to relate to others. Several patients have commented to me how personable she is & how she will be definitely suited to work in the PT field. Molly is a great listener & demonstrates empathy for the patients. Molly is the definition of being a true team member - willing to help, communicate through each stage of their lives & I believe Molly assisted in that mission in her caring attitude & interpersonal relationship on a daily basis.

(Additional comments to support a grade/ overall performance):

Skilled & motivated future PT student. She is personable, compassionate, hardworking, motivated, & determined to succeed.

Overall Performance:

Final Grade (100% scale): (please circle one)

94.9-92.0	91.9- 89.0	88.9- 86.0	85.9- 83.0	82.9 - 80.0	79.9- 77.0	76.9 - 74.0
73.9- 71.0	70.9- 69.0	68.9- 67.0	66.9- 64.0	63.9 - 60.0	<60.0	

- » The student has maintained a log of hours. A minimum of 240 hours is required for a 6 credit Internship.
- > 70% of the final grade will be based upon the supervisor's evaluation.

Supervisor's Signature: _____ Date: 5/1/11

I agree ☒ disagree _____ with my Supervisor's evaluation

Student Signature: [Signature] Date: 5/1/11

Molly Maloney

Informational Interview

Interviewee: Kristy Turner

Physical Therapist for PT Plus, Health Alliance Hospital

Phone#: 978-343-5015

I chose Kristy to interview because she has had a lot of clinical experience and received her masters degree before beginning her career. Now, that the physical therapy degree is doctorate level she is attending graduate school online through Temple University in Pennsylvania. Here Kristy is taking one class a semester because this is all that Health Alliance Hospital will pay for. It will take her four years to complete this program by taking one class per semester. Kristy has been very helpful and informative through this experience and I wanted to get a better insight to how she got where she is today.

1. How did you decide to go into your career as a physical therapist?

Kristy first wanted to be a veterinarian but realized that it was a lot more education than she had planned. After meeting with her guidance counselor who had suggested physical therapy, Kristy did some research and decided that this would be a good career path for her. She exclaims how she made the right decision and that she is very happy and successful with her career.

2. What school did you attend to gain your degree? What was the most difficult & enjoyable part of being in graduate school?

Kristy explains how she attended Quinnipiac University in Connecticut which took her 5 and one half years to complete and gain her master's degree. Kristy had the most difficult time studying for the many hours that she did, and also had a difficult time with preparing and presenting research projects. Kristy explains that the amount of time spent studying and working on her education aspect of her life was something that she was not prepared for.

The most enjoyable part of her graduate school experience was being able to work in the clinical setting and apply her knowledge in the field. Kristy enjoyed doing outpatient physical therapy over any of the other areas that she

did clinical work in. In these settings, Kristy explained how these experiences were real life and was a lot different than what she had learned in school. This experience was absolutely necessary for Kristy to be prepared for working out in the actual field. Kristy states that she learned more from the physical therapy assistants that worked in these clinics because the physical therapist would be more focused on evaluation of the patient and making the exercise plan, and PTA's were the ones who would instruct and work with the patient.

3. *How did you get to the present position/ what positions in this field did you do before?*

Before her current position as a physical therapist at Health Alliance Hospital, Kristy came out of school with a full time job at Novi Care, outpatient physical therapy for orthopedic care and she also worked wither current supervisor there as well. After being laid off Kristy explains how she was without a job for a while until she was offered her current position full time with the same supervisor at Health Alliance in June, 2004. She also worked per diem in acute care to make some extra money.

4. *What is a typical day like as a physical therapist for outpatient care?*

Kristy explains that on a typical day she will see up to 10 or 11 patients. All patients have orthopedic injuries, and vary with any ages except pediatrics. She sees more sports related injuries because she works a later shift when the younger athletes are out of school. Evaluations are scheduled for an hour block and other patients are booked every half hour unless they need special care. She goes through her exercises with the patients and does paper work at any chance she gets. She also reminds me that there is a lot of paper work that goes along with this career.

5. *What advice would you give a student entering school?
Entering the field?*

Kristy expresses how important it is to get good grades and to understand how much time and effort you need to put in to learn all of the necessary information to become a successful physical therapist. She reminds me that I may not be prepared for the amount of time that will be consumed by school and studying.

For entering the field Kristy advises me to absorb as much information as I can from my fellow clinicians. Kristy suggests asking a lot of questions is very important in order to make the right decisions in the field and gaining the confidence to work with different patients. Some sites may offer a mentor program for new physical therapist so that you can ask whatever you need to in order to feel more comfortable having patients one on one and being able to balance multiple patients at the same time, which Kristy suggests is a good idea. Kristy also explains that in this field it is very important to continue education. Physical therapy is constantly a growing field in which new techniques and skills are researched. This is very important to keep up with because this can be helpful and beneficial for physical therapists to be successful with rehabilitation. New research can provide ideas for patient exercise programs. Kristy advises me to attend seminars and conferences to keep up with new research.

6. *What skills do you look for on a resume when an entry-level position is filled?*

Kristy explains that for an entry level position, the physical therapist is just getting out of school and their resumes will not be built as much as other positions which people may need more experience. Kristy has been a part of the hiring board for some people entering the field through Health Alliance Hospital and in this position she would make sure that the physical therapist had reached all of their necessary requirements for clinical experience or any extra clinical experience that the physical therapist has had. Also, Kristy reminds me that having good communication skills and having experience working with different patients or any kind of leadership qualities would benefit the physical therapy department and the care of the patients. She also explains that the prospect should fit in with the other staff members in order to continue successful teamwork. Kristy states that the interview session is also very important part of the hiring process.

General conclusions regarding the career path of a physical therapist

The career path of a physical therapist takes time to reach but is overall a constant learning experience and very rewarding. Starting with a physical therapy graduate program there will be a lot of time, *effort*, and studying put forth into being a successful student. From Kristy's advice I have learned that it is difficult to be prepared for working alone in the field after you graduate. Patient care is more than just making an exercise plan but also to instruct

patients to perform exercises and motivate them to continue rehabilitation at home. Working with fellow clinicians to improve team work is very important. Continuing education in this career is very important to be a successful physical therapist. Through time and experience in this field, you will develop the confidence to take on any challenge that you may come across.

Did Interviewing help solidify whether I want to enter the field?

This interview did solidify that this is the career that I want to enter. Kristy gave me the good and bad sides of the career. Every career has its upside and down and having an insight to these things will help me to try and be prepared for the obstacles I will come across in this field. I have always wanted to get to know different people and help them to improve their functions and quality of life. Kristy has assured me that physical therapy is a very rewarding and enjoyable career. This interview has motivated and encouraged me to continue my education and has made me very enthusiastic to start my career as a physical therapist.

What would my job description likely be if I enter this field?

Physical therapists help patients suffering from injury or disease to restore function, improve mobility, relieve pain, and prevent or limit permanent physical disabilities. In addition, they promote patients' overall fitness and health. Physical therapists work with health-care teams that include physicians, occupational therapists, and psychologists. They are employed by hospitals, nursing homes, or rehabilitation centers.

Physical therapists test each patient and design individual programs of treatment. They may use massage to improve muscle condition; apply ice to reduce swelling or heat to relieve pain; and utilize therapeutic equipment, such as whirlpool baths, ultrasonic machines, and ultraviolet and infrared lamps. They teach patients how to do exercises with such equipment as pulleys and weights, stationary bicycles, and parallel bars. They also teach patients and their families how to use and care for wheelchairs, braces, canes and crutches, and artificial limbs.

Physical therapists often supervise and instruct aides and assistants who help carry out programs of treatment. Therapists also keep records and write reports on the progress of each patient.

Additional qualifications to begin

In order to get into graduate school you need to fulfill all required prerequisite courses and for most schools, observe in different clinical settings for the required number of hours. In addition, you must pass the Graduate Record Examination. To get a doctorate degree you need to pass all required classes and do all clinical experience required. In addition you need to pass physical therapy exam for the state.

Molly Maloney

Exercise and Sport Science Internship

Physical Therapy Plus: Out Patient Physical Therapy

Health Alliance Hospital: Burbank Site

Reflective Paper

What have I accomplished and what have I learned (skills and knowledge) from the internship experience?

This internship experience has helped me to learn many skills and gain a lot of knowledge that will be very beneficial in my continuing education and future career as a physical therapist. One of the skills I have improved on is communication. In this field you communicate not only with patients, but fellow clinicians as well in order to make for a successful rehabilitation department. I have learned through practice, how to interact with patients to create a trusting relationship in which they will help me to instruct and motivate them to reach their rehabilitation goals. Some patients have a difficult and long rehabilitation experience and continuing a positive attitude while working with patients is very important to keep the patient from getting discouraged. Physical therapists always have to communicate with other doctors and health care professionals who are involved with the patient. You need to be able to communicate with these professionals in order to work as a team to create a successful rehabilitation program. Having the confidence to instruct patients and ask for help from other professionals is very important part to success.

Learning how to make decisions that are best for the patient is a skill that is very important and will improve with experience. I have learned that many skills will be learned and mastered in time, and there is always room for improvement. Each patient is different and even when they may have pain or symptoms or injury in the same areas, you will usually use a different exercises plan for each patient. There are many factors that influence what kind of plan and which exercises to choose for a patient's rehabilitation. These factors can include what medications they are on, what previous injuries or surgeries they have, or any other contraindications they may have. I have learned that you need to do different stretches or techniques during the initial evaluation in order to decide which exercises will work best to relieve the patient's pain. Also, throughout physical therapy there are many different modalities of pain relief in which you can try to use with the patient to relieve pain and improve function. These modalities include applying heat, ice, ultrasound, electric stimulation,

iontophoresis, and massage techniques. I have observed the physical therapists using all of these different modalities and have learned how and why they work for pain relief, and when to use these modalities.

There are many different injuries, diseases, and disabilities that I have learned about throughout my internship experience. Having some knowledge about these different things will help me to be prepared when and if I come across these things in my future. I constantly saw new patients with different injuries, and some diseases in which I have never heard about. Learning how to handle these different patients and what techniques and exercise programs are most appropriate for them has been very interesting and beneficial for my future.

Educating patients about their injuries in a way they understand is very important. It can be frustrating for a patient when they do not know what is wrong with them or why they are performing the exercises that are given to them. By talking the patients through the exercises and showing them the proper way to do these exercises is very important for the exercises to work and to prevent other injuries that may occur with incorrect techniques and bad posture.

I was also fortunate enough to observe a few surgeries at Leominster hospital. I watched three surgeries that day: a total hip replacement, total knee replacement, and a bilateral wrist implant. This was very beneficial to see because knowing all of the stress that is done to your body and what exactly goes into the patients' bodies gives you a different empathy for patients. I was able to work with the anesthesiologist and he explained how each procedure works and what steps were taking place in the operating room. This was a great experience which I was able to gain a lot of knowledge.

Have I fulfilled the goals in my learning contract (how and why they have changed?)

I feel that I have fulfilled the goals for my roles and responsibilities section of my learning contract during this internship experience. One of my main goals in my learning contract was that although I could not work one on one with the patients, I was enthusiastic to take on any roles and responsibilities that I was given with a positive attitude and professional demeanor. Throughout my experience at my internship I have assisted the physical therapists to teach the patients exercises and help to direct the patients if they need assistance in any way. In addition, I helped to clean and maintain equipment in the facility. Any tasks that the therapists would ask me to perform I would do in the best way that I could. I remained professional in the way I dressed, how I spoke with the patients and other faculty. I am always prepared for my internship with my badge, notebook, and anything else I may need for the day.

The academic portion of my learning contract stated that I want to learn skills and strategies that physical therapist use and advice about continuing my education. I have gained a lot of knowledge about the skills necessary to be a physical therapist. I have learned how to rehabilitate many patients with different injuries and diseases, as well as how to communicate with these patients. I have learned about different equipment used in the physical therapy field and how this equipment is beneficial for patient care. I have learned about many exercises that patients use in order to gain strength, balance, flexibility, and better posture. I have tried to learn how to adapt to different patient needs as well. During my informational interview I was able to get a better idea of what graduate school will be like and how to prepare for this upcoming experience.

In the professional development portion of my learning contract I outlined how I had hopes of learning more about professionalism in this field and what characteristics are important for a physical therapist to have in order to be successful. I had goals to gain more experience in my communication skills between patients and fellow professionals. I have learned how to speak to patients in a way in which they can understand you. While communicating with everyone who you come in contact with in the work place, it is important to remain professional for the other person to trust and respect you.

My personal development goals have definitely been reached from what I had stated in my learning contract. Communicating and motivating patients are skills that I have improved and that I will continue to use throughout my career which can make my experience as a physical therapist more rewarding. Some patients can be difficult, impatient, and negative towards rehabilitation and physical therapists. I have learned that it is important to continue being positive and encouraging the patient for success. I have gained a lot of experience by speaking with patients and learning how to communicate with them for a successful experience. My confidence and self-esteem for working with patients and other professionals has been heightened throughout this experience, which will be very beneficial for my future.

My goals outlined in my learning contract for job hunting have been fulfilled through this experience. This internship has shown me that there are many options in the physical therapy field. I can choose which populations I would like to work with, and what kind of site I would like to work in. I have asked a lot of questions to the physical therapists in my internship site because they all have had a lot of experience in the field. I will look over my evaluation in order to see what I can improve on in order to be a successful physical therapist, and take the advice given to me when I move on to graduate school and eventually into the field. These physical therapists will be a great reference and I will continue to keep in touch with them for any questions I may have along my career path.

Obstacles faced and methods for overcoming them and what I learned in the process

One common obstacle faced as a physical therapist is that you will always come across different patients. These patients may have pain in the same area; however, have a different injury which needs different exercises to improve. In this case, the physical therapist would evaluate the patient to see which exercise program and modalities of pain relief will work for that specific patient.

As I have mentioned previously, some patients may have a negative attitude about rehabilitation, and may not be motivated to do the necessary exercises. Patients may get frustrated because of how long it is taking them to feel better. This may cause patients to miss appointments or make the experience unpleasant for both physical therapist and patient. In these cases, it is important to keep positive and show patients their range of motion or strength improvements from their initial visit in order to relieve their discouragement. This will assure the patient that they are improving and motivate them to continue and do their exercises at home.

Another obstacle faced is, sometimes patients are not making any improvements with physical therapy. In these cases, the physical therapist would want to communicate with other physical therapists or doctors to get advice for a different exercise plan, or research different methods or techniques to use to try and gain some relief for the patient. Consulting a doctor or surgeon for a second opinion of the injury may be beneficial in order to rule out any injuries that may have been undetected or suggest any surgeries that may be necessary in order to repair injuries. Having been exposed to some of the challenges of this field will be very helpful in my future when I come across similar situations.

Observations about professional field and organizations (challenges/ opportunities/issues)

I have learned that there is more to being a physical therapist than just handing out exercises programs. There is a lot of paper work involved in being a physical therapist including keeping up with patient charts, and communicating with insurance companies and workers compensation. Some insurance companies do not cover certain kinds of care and this may be very frustrating to the patient. Do not blame you for these unfortunate situations. As a health care provider, it is difficult to see a patient who cannot afford to be cared for in the way they need. Being able to speak with insurance and explain to patients about care is important to keep their trust.

I have learned that continuing education in this field is very important and constantly available through courses, seminars, and conferences. There are specialty courses that are

offered for physical therapist to take in order to gain licensure for a specific disease or injury. Keeping up with new research on injuries, procedures and exercise techniques and modalities to relieve pain are important to continue a successful career. The physical therapists at the Burbank site have a monthly journal review in which they discuss new topics of research. They are currently trying to create and research study of their own.

There are always issues regarding the site and staff members. Usually these things are brought up and discussed at staff meetings in which the physical therapists will interact with one another and give their input and suggestions on the topic or issue. It is important to address these issues when necessary in order to keep up with the success of the site. Physical therapists especially in a clinic such as this always need to work together to keep up with new ideas to improve patient care.

How your definition of professionalism has changed

I have learned that presenting yourself as a professional is more than just the way you dress. My idea of professionalism is the way you present yourself in situations. Communicating with people with confidence and using good interpersonal skills is very important. In addition, professionalism is also the way you organize and manage your career. Organizing your time and paper work is important to be a successful professional. Managing your stress in the workplace is also a very important part of professionalism. You need to keep a positive and composed attitude while working with patients and fellow clinicians in order to show your professionalism. Another problem that arises with patients is when patients try to get too personal. You need to keep your professional mindset if patients ask you hang out outside of the workplace. Getting too personal with the patient is not professional. I have learned a lot about professionalism through this experience and I will keep this professional mindset with me throughout my education and career.

Future education and career plans

My future education plans are to continue my education with graduate school in physical therapy, which I will apply to in the fall. Through my graduate school and clinical experience, I will decide what kind of site, or specific population I want to work with. After school I will work in the field and continue education throughout my career by keeping up with new research, attending conferences and seminars, and taking any courses necessary to gain new skills and continue to develop a successful career. I am enthusiastic and motivated to continue my education and reach my goals as a physical therapist to help patients who need rehabilitation and help to improve their quality of life.

Any other reflections on the internship experience you want your colleagues to know

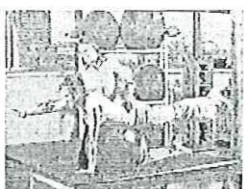
After my interview with Kristy Turner and speaking with the other physical therapists about their graduate school experiences I realize that I will put a lot of time and effort into starting my career but in the end it will be very rewarding. I feel that this career will be very enjoyable for me.

Like any career, adaption to fellow clinicians and patients takes time and can be difficult. Realizing that no patient is the same is important to find a successful program for them. Also, continuing to encourage patients improves their attitudes and increases the success of their physical therapy experience. I have also learned that it is very important to work together as a team in this field. As a physical therapist, I will constantly be communicating with other professionals and being able to ask questions and let people help you will make a more successful and enjoyable career.

The physical therapists at PT Plus always have the patient's best interests in mind. They always work with the patients to help them financially be able to do physical therapy and make the experience enjoyable and helpful. They have given me great advice and included me in many aspects of patient care in order to educate me in the field. They are always willing to teach me something new and I have learned a lot more from this experience than I could have hoped. This experience has positively influenced me to continue my education and move forward to reach my career goals as a physical therapist. I would definitely recommend this site for students who are looking for an internship in the physical therapy field.

	<p style="text-align: center;">PHYSICAL THERAPY PLUS</p> <p style="text-align: center;">HEALTH ALLIANCE HOSPITAL: BUROATIK SITE</p> <p style="text-align: center;">Exercise and Sport Science Senior Internship /lolly Maloney</p>	<p style="text-align: center;">ROLES AND RESPONSIBILITIES</p> <ul style="list-style-type: none"> ® Assist physical therapists in showing patients exercises and setting up equipment for them to use. ® Cleaning and organizing the equipment around the site ® Taking on any tasks with a professional demeanor and positive attitude ® Observing skills of physical therapists and asking questions to gain more knowledge in the field.
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<p style="text-align: center;">HAVE I REACHED ALL THE GOALS OF OUTLINED IN MY LEARNING CONTRACT?</p> <ul style="list-style-type: none"> ® Roles and responsibilities ® Academic Development ® Professional Development ® Personal Development ® Job Hunting 	<p style="text-align: center;">ACADEMIC DEVELOPMENT</p> <ul style="list-style-type: none"> ® I have learned: <ul style="list-style-type: none"> • skills and facts about physical therapy, injuries, diseases • about patient care and how to educate patients about their injuries and exercise programs • different exercises and how they are beneficial to improve balance, flexibility, endurance, and strength ® With the informational interview I have learned about graduate school programs and how to prepare for my future
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PROFESSIONAL DEVELOPMENT

- ® Dress
 - you always want to dress in a professional way In order for patients and fellow clinicians to respect you
- ® Communication with patients and other professionals
 - As a PT you will always *be* interacting with patients and other health care professionals
 - You want to gain the trust of these people for a successful career
- ® Organization
 - Being organized with paper work and your time is important part of a successful career

PERSONAL DEVELOPMENT

- ® Motivating patients with a positive attitude is an Important skill I have developed throughout this experience
 - Patients may get discouraged, always assuring them that they are making progress is Important
 - Showing patients their progress throughout their time in physical therapy is very encouraging to keep them motivated
- ® I have gained more confidence to work with fellow clinicians and patients
 - I have more confidence with talking to patients about exercises and injuries
 - I feel more confident interacting with other physical therapists and asking them questions to keep gaining more knowledge in the field

11/11/2011

JOB HUNTING

- CU I have learned that there are many options in the field of physical therapy
 - You can have the opportunity to work with different populations
 - You can work in different settings
 - Acute care, outpatient, inpatient, home care, pediatric care
 - You can become certified in specific areas of interest
- ® The therapists at this site are a great reference for my future and to contact for any advice I may need in my education and my career

OBSTACLES FACED AND WHAT I LEARNED ALONG THE WAY

- ® Patients are always different
 - Important to evaluate patients to know which exercise programs will work
- ® Patients may have a negative attitude towards physical therapy
 - Keep positive and encourage patients
- ® Patients may not make improvements with physical therapy
 - Communicate with doctors and other PTs

FUTURE EDUCATION AND CAREER PLANS

- « Continue education with graduate school for physical therapy
 - Clinical work
- ✓ Work In field
 - Decide which population and kind of site I want to work In
- Ⓢ Continue education throughout career



REFLECTIONS ON INTERNSHIP EXPERIENCE

- Ⓢ Experience was very beneficial
- Ⓢ I will take advice given to me through my future as a graduate student and in my career
- Ⓢ I was constantly involved in patient care
 - Therapists would educate me with facts about Injuries, diseases and how to treat these patients
- Ⓢ I would recommend this internship to students looking to gain more knowledge and experience in the field of physical therapy

QUESTIONS?

Internship Experience



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Dan Hickey
Fitchburg State College
Exercise and Sport Science
Internship Learning Contract

Academic

My objective as an Athletic Trainer Intern is to observe and obtain some of the basic skills needed to be successful within this career. I would like to gather as much insight on everyday tasks and activities from this internship experience. I would also like to apply what I have learned at Fitchburg State College to any and all applicable concepts in the field of Athletic Training. During my internship experience I will be assisting Matt White and the team Strength and Conditioning Coach with all duties typically associated with the day-to-day activities of a Head Athletic Trainer and Strength and Conditioning Coach at the American Hockey League level.

Professional Development

My goals for professional development will be focusing on becoming familiar with the administrative side of Athletic Training which may include paperwork, injury treatment, injury prevention, communication with adjunct medical support (i.e. doctors, dentists, physical therapists). I want to learn all aspects of this profession including those that do not relate to physical treatment, such as paper work and prescribing exercise routines. This internship will ultimately prepare me to continue my education in the following years and better my chances in search of establishing a successful career.

I. Job Description

Athletic training in the American Hockey League (AHL) is conducted by all health care professionals who collaborate with physicians to optimize an athlete's performance and well being. Athletic trainers have many responsibilities. These responsibilities include the prevention, diagnosis, and treatment of medical conditions involving impairment,

functional limitations, and disabilities. **It** is the responsibility of an AHL Head Athletic Trainer to manage the player's safety and well-being during physical activity both on and off the ice. My role as an intern is to assist the Athletic Trainer, within my limits, in conducting all of these responsibilities.

II. Academic

During this internship I will strive to apply the knowledge I have attained within the Exercise and Sports Science major. I would like to utilize my experience with the functional capacity, adaptations, and the mechanics exercise to safely improve the athletic performance of a professional athlete. This will, of course, be conducted under the Athletic Trainer's supervision. I hope to learn proper methods of stretching, wrapping various joints for support, applying heat packs, strength and conditioning skills, and other injury treatments.

III. Professional Development

After the completion of this internship I would like to better prepare myself for what's to come in an athletic training career. My future plans are to continue my studies in higher education and attain a Master's Degree in Athletic Training. Obtaining a Master's Degree will allow me to pursue my career goals of becoming a Nationally Certified Athletic Trainer. Taking what has been learned in the classroom and applying it to real life situations is the only way to perfect a skill and I plan to accomplish this during my time at this internship. I would like to become familiar with wrapping and taping injured or weak joints, EMG-stimulation, applying heat and cool packs, massage therapy, common stretching/warm-up routines, prescribing exercise sessions, and become familiar with any dietary regimens an athletic trainer may prescribe. Observing day-to-day routines will help to familiarize what the primary goals and responsibilities of an athletic trainer would be.

IV. Personal Development

Personally I plan to develop a basic understanding of what it takes to become an Athletic Trainer. Learning in a field setting as opposed to a classroom setting will allow me to develop from a different approach. This internship will provide me with the insight to better prepare myself for continuing my education in this career. I expect to develop an understanding of what it takes to respond to an athlete should they ever need emergency medical attention. I am hoping it will provide me with the ability to focus and apply what I have learned to more specific situations.

V. Job Hunting Goals

Having experience with such a high caliber team will help me understand what it takes to prepare myself for becoming a Head Athletic Trainer in the AI-IT.,. After my internship, I will be able to set my expectations and figure out what I will have to do to pursue this career. In the end, I am hoping to narrow my focus and put into perspective what it is I actually want to do in life.

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DEPARTMENT OF EXERCISE AND SPORT SCIENCE -
FRITCHBURG STATE COLLEGE
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3. **Salary and time commitment - The student will spend three hours per week per academic hour for fourteen weeks or its equivalent working with some phase of the program. For three credit hours, this amounts to 125 work hours. For six credit hours, it would be a minimum of 250 hours. Time credit can be given for work done away from the workplace if agreed to by the faculty of the two institutions. The student will keep a journal/log of the hours spent at the site, and the type of activity/work performed.**

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SPECIFIED MEDICAL PROFESSIONAL LIABILITY OCCURRENCE INSURANCE POLICY

OFFERED THROUGH ALLIANCE HEALTH PURCHASING GROUP ASSOCIATION
PURCHASING GROUP POLICY NUMBER: 44-2010129

1	DECLARATIONS	CERTIFICATE NUMBER AHC..2800204.		
1.	Named Insured (The students Of Fitchburg stato Conege			
2.	MAILING ADDRESS derntc Affairs. 160 Peart Street Fitchburg, MA 01420			
3.	Policy Period 12:01A.M. Standard Time A1 From: 01/01/2009 to: 01/01/2010 Location of Designated Premises			
4.	<p>The Insurance afforded liability with respect to such of the following types of Insurance (as indicated by specific premium charge or charge)</p> <table style="width: 100%;"> <tr> <td style="width: 60%;"> <u>COVERAGE</u> A. Professional Liability <input checked="" type="checkbox"/> B. General Liability <input checked="" type="checkbox"/> C. Endorsements <input type="checkbox"/> </td> <td style="width: 40%;"> <u>PREMIUM</u> NO OPTION TOTAL: </td> </tr> </table>		<u>COVERAGE</u> A. Professional Liability <input checked="" type="checkbox"/> B. General Liability <input checked="" type="checkbox"/> C. Endorsements <input type="checkbox"/>	<u>PREMIUM</u> NO OPTION TOTAL:
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5.	LIMITS OF LIABILITY			
	\$1,000,000 each Incident or per Occurrence	\$3,000,000 In the Aggregate		
6.	Deductible (if applicable): each Incident or per Occurrence			
7.	The Named Insured Is: <input checked="" type="checkbox"/> Sole Proprietorship <input type="checkbox"/> Partnership <input type="checkbox"/> Corporation other: Affiliation: Student Malpractice at anket Liability			
8.	Business or Occupation of the Named Insured: Student			
9.	This policy is made subject to the printed conditions of this policy together with the provisions, stipulations and agreements contained in the following form(s) or endorsement(s): PLP-2025(01/95), PON-2003 (1), (Ed. 03109), PIE-2081 (12/97), PLE 2156 (1),			
	CHICAGO INSURANCE COMPANY 33 W. MONROE STREET, CHICAGO, ILLINOIS 60693 <table style="width: 100%;"> <tr> <td style="width: 50%;"> REPRESENTATIVE: MARSH Affinity Group, sales a service of SEABURY & SMITH 12421 Meredith Drive Urbandale, IA 50398 1-800-503-9230 </td> <td style="width: 50%;"> BROKER: </td> </tr> </table>		REPRESENTATIVE: MARSH Affinity Group, sales a service of SEABURY & SMITH 12421 Meredith Drive Urbandale, IA 50398 1-800-503-9230	BROKER:
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Mltrr WH-ll-i Ht3 71+0VGjHr fßBt;trt **PIJP** 772!TCf/1'Jf1 fi#D IP H£
EvER use2> t-f,IMID f?ItJD /l-1-11-T **ffF** !Vif!ELV US£5. tT /?tlf£=
s,... Lf iLl v C'A.T if!.IIIJ1Jf1.. **WJfP!II** f-j;... L), /'ri: (Jt;UitL 'I AFT 611-1'1£"<...

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5£()(\)b Ptzii(TICE, '7774e- — (J{:'P' ITE RlC!UI"J. TOMV lfrA /.)
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IJ-NJ:=. A- SCf2.-JM /} Jt ffiVPLe .oF 'TH-5= ✓ fUt2.e;: KA.'TIA)C., FOR_
TH!r Pt/2\$7 77 15Act:.. Z 'Z (C;tzoIN,5HQuU:>eR.. 1,./I/J/Ab).

2/ZL/ 10

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12(?)('N1R.£> 1'1€ 7?) 1'l,¥K.G" .477JIZ(f))(g= p(),e 'Tlft== 9 (\$t4LUJN JV4S /IN})
Tb FILL · nI Wl1-fffe8o77t_cc. EAcH- PL NER.. /fils IJI(;"t ()wAJ
'DG'SISNIll[i]"b 8DTTL€- #G"tP P12CvCNT The 'Sf>I? /ID dF.' S!cKAJe-ss,
:&.:f:t#€ 7716 PG\$ fxJMe;: U'JS LAIILL (OMGIN RR... IC? AN'D iTI-/)
A>R- llt;,"l-1". P12lot2- 1IJ ITJNCj Fvu.v ZX2t7-:JCOED h1R F1c.ilcn('f!=
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7l:NJ:>G12. e. 5oRG Musc.L€\$. To'P/I'1 MA-"11 ru c I+OW€b M&
How TO PR£P THG '-'Hh L\$ WrH HoT A \ CDt-b. 1/C ASK.e!J
Mf7 fV;H}I 771 rPMPS r:Hoow · i3!7 IMJ)). I .M9-b ro ILJo,t::: 7Ht:=A1
UP /tv &;x:::> \$ /-;le #A:b. Fo/2.. 'THG CoLD /f.> f>&°r=: AN'b
mG" t£DT /I/8 IOZOP. 71lft TvBs ,4 (; v\$!?:). TO 77.2e/fr Mri (LF
£FN 7/J'Jvs.uf S1 N.I:> PAIN. fo;:>fT/ I L W Pf>.£7}) /lly
F/t<ST wt21s1 Ill.!) IJPPLIGI:> H.£Frr/('tJtl:> p,t;CS.. 1 F1ND ;r ;MR.b
7?J auj}C }em! ii HT lIJ WRA-P 77+€ 7IJ-PG, l?ur J'H (4NFI/:ui-N/
17111-r 1'iL. #ii J!li · C r B m;:e. wn-;:r ;:::R/k'nc. lIPreiZ 7JIE' (/liM
/W!) oME Me ,PtJN€"125 if/IV/r. I 1/11 1IJ Pl\$;tUFec I ,7ffe;: 71!/IINGle-
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I IJ-IS(J M€I" -r71E 7EAiv1f: TR.€NtfJ!H) (CYVDI notVt/II (d/IC.H
/?>J:>1-j. /'1'1 tt> KtN4 HI2Wf/IZ. L;0Ti!IJC, 73 ICNM fh.f
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z/ /200

loD!tV 77it31?&- · Wif. IJ-N6ntefZ- P!ZF - 11-M KA- .A ,.e
The" S.uh"C:₁ WJ+ICH- ls;: \SALL/ fR.elf/ uC.,Hfj 17-f-6 C" Cif K... PT
THE t;uy **W** **Z** PLITYIN 't'fA-1 NI 11T · Ot.rr oN
1716 IC..E Ft>R- **£ 4** CZ,(Vbll71Yvi/J(J,, 77-IJ\$. J\$tJ'T UIJCOM/.)J/V
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eYE/If /P" n;EV /l-R£N' r t9 1w '@\$ -;.,AJc₇ AJI2 7Jic C3 ES.
7lf8E · **A** T'II'ICA-Uif ?liE- AYIYE'R!' wt/6 lft?t;E- /NJulf!!..JES
J)/ltr /11213 U;VR..{;l r(f='..b 7L> ?ll611e. IJ81LI 7'/ 7V \$/(9)7;; APTEJK..
71f6 pC.,dS T»G (, vy<S wI((. USvllt..l'l ('frnF /N 1=0(2 /CG 7l:> ()6₁
VfE 7HG' Wifll.L t..S₁ dt2.. t1fdt<¥:....t)r / IIZ&Tc#. 7JIEA/ :77T' ,c;
t:=f3W HrJves V?> **O** ..,WMG !=tR- t.-vNt:..H C nt//1/q
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2/'29/201()

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3/to j2016

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:11-tCJ,vll-GJJ IIIII tNJvt<.v n r;s GMTIC rAIEHtuS', wHlcH MtFrr
1/<.€11TE1:> WITH OEcp /Jt;s I'?#SsA flt.Jb 1 1?/H&l'-rPA-c,cs, /
IILS() 6or ?a &e MATT ()E mE cM4-Sr;r1 hiii'MAIE ' FiJl<' 17'IC
rlfZGI T711G'. /IE USeb 7Ht qN /I tilfY wfnf ,lf HIP fie>ldR_ tAlJutl.vj.
I /lt-\$6 6tI/TO iWtK. MT}-1 Srl?eAlGnf IIA'II Co In(JNIIV(;
C'Ofic/'1 /tBNI h A/61V PPC>CSIIA-IV #c-t J:>EtteLc;'J/ltlf: ? n> HeLP 11/Jt.v rt:
PIAYet<!.... .S712e'N TH, AE><lt!/?/l.-try ,AAIJ) 'Posrv/?..6'. /He (4!/Me' WEN-I
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3/12/2a10

/oDIN MII-IT Hlfb Vb - , - PUI YEI< . WHO J) Hvt<r 7JI .R
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fr!A,- 17le/V S C/2EJ9/€ t'v&Tl)M FCi9M Pi'96 TH/11 SI.I N"l:Jf:iJ
lfND .tVSilt')NE.D . 'PIE S;ff tTP' /IVJvl2:v. 77/E, . FJ9b ;1-#r'l: 'rJ t&e-
{1/IIJ€ SPEC.tP'IM't-(./ 7l> WE R../JYC!?'sPa::>r ?"?"ri'TT
/T . l.?e:- /JBU:r :ro Ar /...vTZ:> ,s 14'T..- l'trTCt::! me- .SKA-'Tf=
we ;ce-b ,t/N b CIEV'ATe)::, 'Tl:t /N..J.IJ iJ t:w Le.

3}1'1/zQIO

rloNt- G 1161ti1Vf>r fiBISlleY. 1D1:>IJV me S/rMe PI 'NeR c()'" PVI-ININ4
O ANILL£:= /N'Jve.v ClfM5 IN Fl1R. PvP-TH-6,?... m.t=llrd"vf?AJT. 1'1/ffT txrtt>e?J
1/(G' me ' (l;BME ll£Rb'l " MA-<lltltfe lf'Jb tttJwe/J 1'1fF ?tJ .SeT-
IT V/> . 'Titli tft,t,qf/f. q(='rs Pit-(£=/) Wtr,y (())t..b 'f/1'l) IC t4 SA!rlltL
,8l2AcG" WM Pt..lkt;") A-12)Vfvb . "T7'rfg::IJIV (J; 7T'6Hrt."" (f)N(N(; HQj .)) . vP ..70 nit:
.r?/CH(N#? 7H/P 81Uit€ 1\$ INt:t.AT£lJ I-IK /1- 8{JJf>) £UV/4i (t. f>N'!OMftTI(ttll.Y,
(fit.J). WAT62- t.U> CIIUU:LI+Tl;'b TJIII.JJV4HtNT nit' /?PAC€. THI' BI<Me/fvKHJN
fhuvl v W GGJ r;E KEcr 8()/H-- rREArMBvtr OMPe.e; 'o'" ,,.b /(€.

,3/n·/zo'c

-rol>4V II P/lf -t,IIME S/IC.Ilr€ Awp lllelll MV t-AME" t!V III./SANVJ Nf.
-rt>DIP/ ,,,, PflACrJtf ll-IG &TMITIIJf) o4-L1£ tJFPeff€b A-N INJ"/2.'1 ?a 11-ls Rt H'
jflN""ff. WA-\$ vttL 'I A PJC.". tDrNtlDe-wrt:tLLf .1-Jlfe E" '111£R€ A- tvo
!rDDti\)C.,. HG W B££ei>tNC, PH.I fAAv,...,4 , v/aL.tAIC) ,ANb IMMtl>Jt.ne- @IV7f>IN .
t f rN'f Ft/2. X- -JH. IHf "j)Jt."(ofl Rvt..t?b t-t(r A BYIIG Ff2 ttrv/Jf7 Wtt1Cl1
, 110tt> , "" t-te Wl"S MNcMifL G, 1P SI72.e"NqTJ+ ANt> Jf> VN"4-BLE '7t) tcJU) It
bTICil.. Wf 15 1'f) Pot.Aelt'/ ouT Or.J /r-l.)uflfb fl£M3fl.11f.. Mlnr' w-AAfPtb tH(:. TihJ 8
11ql-°TI;/ it) H£LP P-tbUC.t & LUIJ Atvl) PLAtEj) It FltJ(-fP- PliiJ""I 01J 1V
P(l611'€NI' F" f3(L u t'\4\(;,. LM! ON ll+lll DA'I wE SDAJ!.Eb H-1 1llvt'16
IN It l>clv1E.D <6ournuN 13efA -l>I'JE' lC> tj.)11c.f liiAN<£ fir: /J'Pe<..71trN. "i1tEN
G -UP.S 1)W D0t1IJil.. ADMIN'ISIEf<£J) ft MIMBtNG, PrC.,t _flff A'f THE &ITE
..c IHnO&T\ , ,A \$.r;f) _l'vf.,C PLATrl) E'f.P£P.!£V[CJ) /Ji) A-HV FOUJt'Nf(vfz., rn£ h'o.v'l l .

ItJ 11-Lt IIP r:rf!N(.,Tit. THIS W"J-s lliJ £i'.F(ji2JMeN1J4'L Tf2elo/f"NJ
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3jz'Djwo

T!Jl; } W1H IJtfl OJ-8 IN HeR\$1/EY. /)P{f/2. "7l'E" t.; ME.
 W€ I.JJl1))6/) VP. BUS /hVlJ /Vh1! W£ ' £ #E,I//)/N{. . 7?;
 /lloRFotJL \1\ . We' e: P£cfQ) 4/2..1Z.,V£ 4-T: 71fE. HoTEL..
 IN .,q.r 3:3D.AM. AP.r€R- D 6PPIN4 mt= ..'lt/11'1 oPe i1-r :rHt;
 /fOT'el.. WE (YIE-bICIU./((NIPMENr \$rRFF) WILL GE:T_vP "f7'e l(Jt.JLe/2. /?.tJ{)fl1
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3/Z-=r/UJO

, IJJ!JtIT 6£1 MiJCrI SLe P, ffUT IT fti..L (ME\$ W7TH 11- Jo8
 \AntEN (IIV Tflt {lDIUJ. :IJil£. 171. APTER IP/It4Hl5 6/tME' . HEII/)
 BfkK. vP WILKS 8!'Rfl6, fl}. ETA . 4:ool1-tl. . SA-1'16" PLitiV
 :PP 6v S tJPP. 1lf 1\$ Ho'ffil. A-'D C)o TO IHf 12JN l?) uP
 Po(2_ . G,Mv1t.

3JZ/20r0

/J.prrrz 1IJJIN5 G1IMt- I HIN£ vcc-c, FV<-L'/ COflfPIE'TEJ:> fvt'J
t=\ T weE'i.ENb iRbiiJJ 712tPl 7HIS W'fK IJ!f. exfttlI.I€"Ncc- 1 wt<..L
N(3'/E{L. l=ft>e.G=T. aEr.TiN4 Tjff!.QIIGH 77ttS .w£ /'1-i) . wlrvN'r Tr>0
:D\FfiCUL- **ro** M£;; **tti** nf-iES I W1JS GxHtJ/f\$7F,b . RntJ M'Sr.: -RJB'-1;
|EVT / .) HAJ) 1{ } i)O rr. AL-L Olt€R- A-11-11J . I wevtl) . 7Q) ME
Tffis IS' IJSSVfIP,N(fi . 771/IT' 7111\$ IS R/ejHT **Ct9 R** P 'rH AJI2.
fVl€. Alrrr S()· MvtH 7IfE -nMv-eL-,/JUT F/!(.r . mrr ev£1U v'flnt
:MIScMBcfi.. n1'16-S ON **a g** 1/Nl:J t-V(JA.JC., 3 }fi-JS ON g JlcN;-RS
;oF StEEl' 1 \$77LL w/I-Nr T0 **W** PI-IS C'-'9 eli?..

2/CJ/ZtI/0

Tjft f2EGvLI/2 Se/ISoN I tMNbiJC> lx;wIJ IfNb WE'K 19-t.RMV
Sfltvfl€b M/I.fJT PLJ9C6 /f :r.t.trr IN ?J/6" "LifY IJr zyr.;
Al!Nr IN JH£ >MscYV 7716"" rt'/I/V {j(J,lt.- **t'/'/t smPP**
{11littmc. 'IP-?t W!!S₁ i:>x-rutl>, IMib 1>.r'ls 7D 6fi1 C;uY> /EHLTTIY ;r;,e .
me tJtA-Y., PS. -IJ/I! M IIM C,my111/; t/lr6: 7l> P£dV11JE &112/I
77Ze""!Tme'MS /A{!) ResnAJy at y5 i?y 6111;11/t; 77'16fM /)Me CJF""t=;

zfo/td'lo

Y8rE:R.biJV wlf5 tM2 p, Ztr fJL!fvF · **zZ** 7?ff yE/IR.,
|Iff® M/ M/}Sr · PUfy -gt;p {;lft'.? cxff I€M:. /Wfltt"/ !fiN£
:tv1 ff" 7!!!I-T PLAVdFP. I/lXJCEV J1AS /J/FPe,eclflr /1/li) I ;wt.Jt/4H r I
:tbi'erJ WHV. It **EIL** ci1/Ji/IIS1 15 l'l./lt€b cW IWTR;nd'IV /11Ji)
/2e(fJVell..y ;N 'TfiG PL/IV. 1JeA tCe {3/t/2,.; G?rJt M/fJr #N{) 1
smcl? '1liE P<,tYEt LN/ift;F WJJ! r-Rurr, t!lt;Ct.f, #MJ YW cr !?IE
#M6t!M' n.; WfTER. 1//1/b Cllr/JII. €. lfuo, ;ybM-nm 11 1MPdf277flfr stJ
tf;tf/Jt.tNC, 0/21tJIL AttxB wlif/ Ciii211 t"!BRdly/f"s ;Ar JI-Jc:-1'1 IU)
/2{P/V,18JLI7Y. / UJIS /IL/JJ (11/ C/IJ!Zf!;€ M/I/L-!N(7 I!< IIV S'/f19/CB"
nt< 1/Pr.R. we {Iffri£

4 /21/Zt>/0

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I (ciiRNGb J?tlfr i# 77IE iJLI'ly . .1r.S l't Jt !e Ac-ren fi L£
R//2. PUIV££!S . .1b I'L,IJN : W7flt .Y}fCv /IRC 1/t/YIII!FtlJ, /?liS
l2£4vfi?Et. <;j>EC!JL .. 7,12EI?r/1leM3 . tAJ. / J:£,e,"J) /1-N/)
.gcFtJee/ tPree ()!TM-E . /'v£ !WI7ccl> m11r . vs-c dF
;t/(:M8!AIC, 11NJJ PlhA.I :fr/ELJic/177(/l/ 71#2(/(/(.;lf . 1/VJCCr;(l7f! IS fi'Ete'j
(1M/'1f// lA/ l'JrE . P .1!\Jdffi. [Yt77-l J'H:,f ,c:-- IC" .Tif'EdTM?AJT
;r 1 ;!lf>Jl!-117Nl' }/11-#P(/JAJ!) !S/fJS'E . /fl?tePS . .
1111T£!/1/lt.) (' /¥FvL.L'f.

4I?,YzIJJ0

WC' G t1/tJW Iiv 1?16 f:(o!Vb /!bzM!tJ. : !ltv-}) 6v8/J. !Yt c)U..lJS
fHJ-r 6G1T!Nd /!fJV/le/). /!111171. #1HJ . m 77/I-K- 10 ME 118(Jtff
B&tAJ4 CfilIePut- WH0 1 .!rLJ(-eh 7IJ IJ-govr Purve=res 19Nb :
mt-, JNJI!et€\$. HE Sill/) T)fil'I !P P£0f>L£ PovNb ovr
I wfl5 · Wln+ 77fb TEitfliS fo1£lJIC/fl 5ffli=F 'Z VVf/liL.b 712-Y.
1Z> P1tv'b OVT" writ) Wl15 INJUIL i> /htl'}) W!/e. I l?/dll4 ffI llfJS
WflS (t21JZ'I uNf1t- \$ I ri!VMIJ fillySeLF TIP 17Jf3AI hl2.ovNJJ
Qv£ 7Ju.VS . F/(!M /7 : jtl} y {2EfJO II. ()TJte/2. "lC1/115 vWitVr)?J
/tAIOw IS j#JU/el> \$0 /l#}T 7l/C') t/1111 fiT 1'11(.
PLITYG!2.6 V!> ft..GT ftN cLX7 £. 17tn It; W!A! C£CR6-C'/ IS. t!tffqR17Jl1./r
ttJ PL/11/ tifP fJtt./LE y. THl bP£1-te:/tf{ E lfl/5 71l:/ff. tv/5 71171T
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s/?/rJ(Jio

✓()1111(;, 1/7 Lu51 **n** 7?1 /11/ltiR1/68TC12 fJlfN/2.C **li**) **IIV** (i'liM£'
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! 7b1JifI **TI'K** TEIIM **lfIrlJ** ?xrr PfiYSICfJL . 711t PIIVJcIILS
: fii2-F (tt/VlJvttE-b i?lf 7}/f' 7Jl/!eE Jr/lrv/ lx;c711/2S 1/NJ ll12E
, REQuiReb UF=oi!E zyc PL/J'!ER.5 '112E ,ee-te/I\$ev fil2 7//E
&o/'1/VICR.. #1117f £xPUJ!t1/tD lit/IT JJIC ;2e'/lb()I'J l71f2. 77/E 1-/V&-1(19{.5'
! 16 -M (</2. 71/c TTIJM LR;I}ILV. 71115 W?ty tp- /J f>I./IYEf<. 1J(.cpvtf2E5
fiN /TIJU/!.y IN 7l1E d'Pr §EIJSOlt/ 771£)LIJV e/2 (/1-Alr my {'(IIJ
f!S FfN !NJvR-y 7}119-T Gor 7Jv-R!Ntd, WC /JSIJN. f/160; IF II
Plfy{(l_ IS IN4 rf2Eif7V) ('v II!TIY ?ln'2- C'rJN U:rc Ilt/'6
IF /1£ **Aff** 7?J ((f1(/TJA.frAE 712e,f/MEA.tr C/12. .Nrr. 711/f. IS .MI l,/fb;
' / liT MV ;IJY£ HIP 1/NIJ Mmr flfJS tcFr /IN oPEN IA/PIIt1116N
(QME" /fliCK- W/EA!eYG'R. I WIJNT Mx **r** GE/%Cml.

/ ime

Sheets

SHAr2t'S

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February 2010

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	10:30am Practice@ OCU	2 10:30am Practice@ DCU	3 10am PGS@ DCU 4pm Bus to Springy @ Springfield 7:00	4 11am Practice @ OCU	5 10am PGS@ OCU LOWEU 7:05	6 10am PGS @ DCU PROVIDENCE 7:05
7 11am Bus to Providence @ Providence 2:05 Super Bowl	8 OFF	9 10:30am Practice@ NESC	10 10:30am Practice @ NESC	11 10:30am Practice@ NESC	12 START 11am PGS @ NESC 2:30PM Bus to B'Port @ Bridgeport 7:00 6	13 Practice TBD
14 11:30pm Bus to Manchester @ Manchester 3:00 5 Valentine's Day	15 9am Practice @ NESC (80 Minutes)	16 9:40am PGS @ NESC 4pm Bus to Springfield @ Springfield 7:00 7	17 9:50am Practice @ NESC (60 minutes)	18 10am Practice @ Holy Cross 1pm Bus to Binghamton	19 11:15am PGS @ Binghamton 7:05 Bus home	20 No PGS 3:45pm Bus to Hartford @ Hartford 7:00 8
21 Practice TBD	22 10:30am Practice @ NESC	23 10:30am Practice @ NESC	24 10am PGS @ DCU PORTLAND 7:05 12	25 11am Practice @ DCU	26 10am PGS @ DCU ABBOTSFORD 7:05 12 BAL POST GAME JERSEY AUCTION	27 10am PGS @ DCU ABBOTSFORD 7:05 12 POST GAME PLAYER AUTOGRAPH SESSION
28 Practice TBD	&J,t>"f-S					

ISH-A ICS

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March 2010

day	1	2	3	4	5	6
S+	7:45am Bus to Logan Airport from DCU 11:47am Fly to Winnipeg 5:39pm (CST) Arrive Winnipeg	11:15am PGS @ Manitoba 7:30	11:15am PGS @ Manitoba 7:30	12:55pm Fly to Abbotsford 3:03pm (PST) Arrive Abbotsford	11:15am PGS @ Abbotsford 7:30	10:15am PGS @ Abbotsford 6:00 Bus to Seattle after game
	8:50am Fly to Boston 5:10pm (EST) Arrive Boston/Bus to DCU 6:30pm Arrive Worcester (DCU)	10:30am Practice @ DCU SKIPPED	10:30am Practice @ DCU DNG	10:00am PGS @ DCU 8:30-12:00 HARTFORD 7:05 4:00-10:30 10	11:00am Practice @ Holy Cross DNG	10:00am PGS @ DCU 8:30-12:30 BINGHAMTON 7:05 3:00-11:30 12.5
	14 HERSHEY 4:05 12:00-7:30 7.5	15 10:30am Practice @ DCU SKIPPED	16 10:30am Practice @ DCU SKIPPED	17 10:00am PGS @ DCU 2:45pm Bus to Albany @ Albany 7:00 12	18 11:00am Practice @ DCU 5	19 10:30am Practice @ NESC 4.5
	21 10:30-J:00 Z. 1:00pm Bus to Lowell 2:00-4:00 (CST) @Lowell 4:00 -5'	22 10:30am Practice @ DCU SKIPPED	23 10:00am PGS @ DCU SYRACUSE 7:05 DNG	24 10:30am Practice @ NESC SKIPPED	25 9:00-1:00 10:30am Practice @ NESC 1pm Bus to Hershey 8:00-10:00 6	26 9:00-1:00 11:15am PGS @ Hershey 7:00 Bus to Norfolk 4:00-6:00am 12
	28 10:00-6:00 @ Wilkes-Barre Scranton 3:05 Bus to Worcester 11:00-12:00 9	29	30 DNG 10:30am Practice @ NESC 6:45pm Booster Awards Banquet @ DCU Center	31 9:00-1:00 10:30am PGS @ NESC 3:30pm Bus to Hartford 5:00-10:00 @ Hartford 7:00 9	W2.. ui2-S	

April 2010

Sunday

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Practice TBD

4 Easter

11:30am Bus to Portland
@ Portland 4:00

18
1:00pm Practice @ DCU

25
10:00am PGS @ DCU
LOWELL 3:05
(Game 7 if necessary)

5
10:30am Practice @ NESc

12
11:00am Practice @ DCU

19
10:30am Practice @ DCU

26

6
10:30am Practice @ NESc

13
10:30am Practice @ DCU

20
10:00am PGS @ DCU
3:45pm Bus to Lowell
@ Lowell 7:00
(Game 4)

1G

7
10:00am PGS @ DCU
3:30pm Bus to Hartford
@ Hartford 7:00

14
10:00am PGS @ DCU
LOWELL 7:05
(Game 1)

21
10:00am PGS @ DCU
3:45pm Bus to Lowell
@ Lowell 7:00
(Game 5 if necessary)

27

1
10:30am Practice @ NESc

8
11:00am Practice @ DCU

15
10:00am PGS @ DCU
LOWELL 7:05
(Game 2)

22
11:00am Practice @ DCU

2
10:30am PGS @ NESc
3:45pm Bus to Providence
@ Providence 7:05
Good Friday

9
10:00am PGS @ DCU
HARTFORD 7:05

16
11:00am Practice @ NESc
(2 hours of free mail)

23
10:30am Practice @ DCU

3
PGS TBD
4:00pm Bus to Lowell
@ Lowell 7:00

10
10:00am PGS @ DCU
PROVIDENCE 7:05

17
10:00am PGS @ NESc
4:00pm Bus to Lowell
@ Lowell 7:00
(Game 3)

24
10:00am PGS @ DCU
LOWELL 7:05
(Game 6 if necessary)

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18 1:00pm Practice @ DCU	19 A	20 10:00am PGS @ DCU 3:45pm Bus to Lowell @ Lowell 7:00 (Game 4)	21 10:00am PGS @ DCU	22 0,X	23 Xc
25 10:00am Ice available @ DCU MANCHESTER 3:05 (Game 1) 5	26 10:30am Practice @ DCU	27 10:30am Practice @ DCU	3:45pm Bus to Lowell @ Lowell 7:00 (Game 5)	29 1:00pm Practice @ NESc	
			28 10:00am PGS @ DCU MANCHESTER 7:05 (Game 2) 8		
				30 10:00am PGS @ NESc 4:00pm Bus to Manchester @ Manchester 7:30 (Game 3) 7	

Sunday

Monday

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Thursday

Fdday

Saturday

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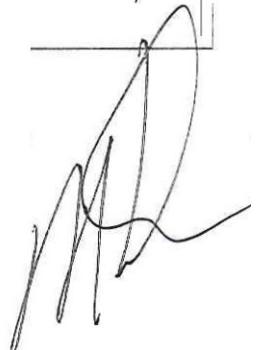
10:30am Practice @ DCU

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						<div>1 10:00am PGS @ NESC 3:30pm Bus to Manchester @ Manchester 7:00pm (Game 4)</div>
	<div>11:00am Practice @ NESC</div>	<div>11:00am Practice @ NESC</div>	<div>5 10:00am PGS @ DCU MANCHESTER 7:05 (Game 5 if necessary)</div>		<div>7 10:00am PGS @ DCU 4:00pm Bus to Manchester @ Manchester 7:30pm (Game 6 if necessary)</div>	<div>10:00am PGS @ DCU MANCHESTER 7:05pm (Game 7 if necessary)</div>



Interview

Dan Hickey
Spring 2010
Informational Interview

Kevin Morley
Head Athletic Trainer: Lowell Devils
Phone: (201) 424-2921
Email: morleykj@gmail.com

Interview Question:

1. When did you first realize that you wanted to become an Athletic Trainer? Was this always your career choice?

I didn't have a moment when I knew. I was involved in sports throughout my childhood and became interested in Sports Medicine in HS some time. I took a class at a local clinic and really enjoyed it, so I chose a college that recruited me to swim and that offered a SM program.

2. What were some of the most difficult obstacles that you have faced following your goals for pursuing your career?

Trying to swim on a Division I team while statting the SM program was a challenge. I was only able to swim for 2 years because I had to start the clinical rotations for the SM program. Aside from that I haven't hit any major obstacles other than getting thru-ough tough undergrad and grad programs of stuff.

3. What does a typical day consist of in your current job?
 - What do you do? What are the duties/functions/responsibilities of your job?
 - What kinds of problems do you deal with?
 - What kinds of decisions do you make?
 - How does the time use vary? Are there busy and slow times or is the work activity fairly constant?

Practice and game days are very different. In general, I prepare hockey players for practices or games, take care of whatever non-emergent problems come from practices or games once they are done, assess and treat any emergencies that happen on the ice during practices or games, and conduct orthopedic assessments and functional rehab programs to prevent and treat athletic injuries. I decide who is and is not able to practice or play in games, and what players can do as they return to play. Practice days are shorter clays, but are busier with rehabs & treatment programs. Game days are very long, but are generally easier in terms of rehab & treatments since the players and I are all focused on the game

4. How did you get your job? What jobs and experiences have led you to your present position?

I worked at Miami University in Oxford, OH for 6 years with the hockey team before I got the job with the Devils. I also work for the ESPN X games and work periodically with USA Hockey.

5. Would you recommend working with one particular sport over others? Why?

I enjoy working with hockey teams, but different sports and settings are right for different people. Some people are better suited for clinics, high schools, football teams, etc. Hockey has worked out well for me, but it's not for everyone.

6. What advice would you give for someone looking to follow a career in Athletic Training?

Don't get into this profession because you think you're going to be able to hang out with celebrity athletes. We work lots of hours and don't always make tons of money. There are some great jobs in this profession, and if you find one that works for you and your family it can be a perfect fit.

7. What were the keys to your career advancement? How did you get where you are and what are your long-range goals?

Make strong relationships with others in the profession. This, like many professions, is largely based on relationships, experiences, and professional networking. I hope to continue to be happy in my current role. If the opportunity to work in the NHL presents itself, I would be remiss in not taking it, but that's not a career definer for me. I enjoy fostering strong relationships with athletes, coaches & management, so for now this is a great job for me. I got here when a friend in the NHL called me to tell me that the job was open. I called the GM in NJ and applied.

8. What are the skills that are most important for a position in this field?

Communication, organization, professionalism and the drive to continually improve and progress your knowledge, skills.

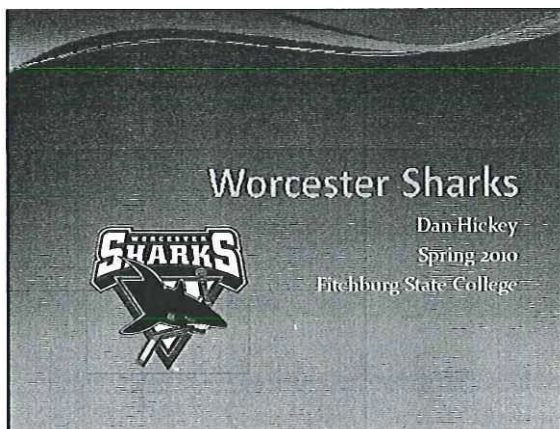
9. What are the professional organizations that you're a member of?

I am active in the NATA, the local organizations, the NATABOC Exam Writing Committee, ESPN Sports Medicine, the USOC Sports Medicine Volunteer Program

Combined with my experience, all of the advice that I have received from already established professionals I have given me a strong idea that this is the career path that I would like to pursue. In talking with Kevin he has given me a lot of insight about exactly what goes into being an Athletic Trainer. In the past year or so Kevin has given me much motivation to achieving my goals. Kevin has also played a huge role in my exploration for graduate school programs. He was one of the first people to help me in my initial steps to searching for the right schools.

Talking with Kevin and the responses he had to my questions has assured me that there is light at the end of the tunnel and to work hard. I have also learned that it's important to stay patient and to set my goals realistically. One of the most important things that I have learned is that as I continue pursuing my goal I need to continuously be learning and growing as an individual. Kevin offers that it is important to build relationships with those around you so that I can learn from them, and be able to establish a networking basis. I know that I am far away from reaching my goals, but in order to get there I need to obtain National Certification as well as receive my Master's degree in Athletic Training. With this in mind my focus is to continue my education and along the way meet people who share common interests and goals that I have.

Presentation



Goals

- Sport specific methods of stretching/warm-up routines
- Strength and conditioning skills
- Familiarize with wrapping and taping injured or weak joints
- EMG-stimulation
- Applying heat and cool packs and their uses
- Massage therapy
- Familiarize with sport specific dietary regimens

What I have learned...

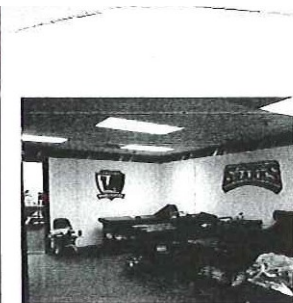
- Basic wrist taping
- Proper hydration
- Post-game methods of recovery (nutrition)
- Massage techniques and things to be aware of
- Hot and cold pack applications and uses

...cont.

- Orthopedic assessment
- Providing acute trauma care
- Exercise prescription and assessment
- > Whirlpool usage and maintenance
- Equipment modification
- Other...

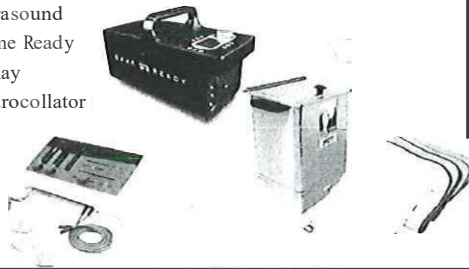
The Facility





Machines Used

- EMG- Stimu lation
- Ultrasound
- Game Ready
- X-Ray
- Hrdrocollator



Injuries Treated

- Acromioclavic ular Joint Trau ma
- Metacarpa l Fractu re
- Lacerations to the face
- Minor muscle tears
- High an kle sprain
- Concussions
- Muscle contusions

Questions?



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Paper

Dear Colleagues,

Spring 2010

My Internship with the Worcester Sharks Hockey Team has taught me many things and I am grateful for the opportunity. This internship experience has helped me to establish and solidify my goals for the future. From the time I was in High School I've wanted to become an Athletic Trainer. It wasn't until I was able to have this experience that I knew that it was the right path for me to follow. I have learned many things about the profession and the different aspects that are involved.

To most, athletic training is consistent to wrapping ankles and wrists, therapeutic massage, strength training and conditioning, and first aid administration. Although that is all true, there is much more that goes into the profession. I have been able to witness firsthand the more psychological and mental aspects of this career. My internship experience has shown me things that I don't believe can be taught from a book. I have learned that this profession takes practice with problem solving and the ability to do so quickly is crucial. During my time with the Sharks I have also experienced how taxing this job can be on one's personal life in reference to hours spent traveling and at the rink. Working at the professional level does not assure a normal working schedule and at times may require well over forty hours a week. This feature in itself requires commitment to the career and extreme amounts of patience.

Some of the many skills I have been introduced to are taping ankles and wrists, hot and cold pack applications and uses, orthopedic assessment, nutrition and hydration, providing acute trauma care, exercise prescription and assessment, whirlpool usage and maintenance, equipment modification, and much more. Along with the hands on experience I have also become accustomed to the less obvious components that come along with this profession. Things like travel accommodations, paper work (injury reports), trainer-doctor communication relations, purchasing and stocking equipment and supplies, and trainer-patient relationship building.

I strongly believe that I have met and exceeded my goals as outlined in my learning contract. When devising the contract, I myself was unaware of some of the many things that are unnoticed by those unfamiliar with the profession. I am extremely fortunate to have been provided with this learning experience. I feel that I have taken the necessary steps towards mentally preparing myself for this profession. After completing this internship I believe that I have begun to build a strong bridge that gaps a student from a professional.

I realize that my goal of becoming an Athletic Trainer for a professional hockey team is not something that will come easy for me. I also understand that I must be patient with my efforts and prepare myself for the obstacles that inevitably are ahead of me. My plan is currently to receive a Master's in Athletic Training from Plymouth State University. I begin my studies at PSU this summer, and hope to graduate Spring 2012. After that I hope to find a job at either the collegiate or semi-professional level and work my way up the ladder from there.

Sincerely,


Daniel Hickey



Kimberly Logan
5-13-2010
Spring Internship Project

Table of Contents:

Learning Contract
Evaluation
Professional Interview
Reflective Paper
Journal Logs
Time Sheets

Kimberly Logan
Fitchburg State College
Learning Contract with Lahey Clinic Burlington

To fulfill my internship requirement with Fitchburg State College, I have chosen to complete a 9 credit internship with Jeanne Macdonald at Lahey Clinic in Burlington, MA. There, Jeanne is the manager in cardiovascular diagnostic services and oversees many nurses and technicians. The academic aspect of this internship would involve me learning about the cardiac rehabilitation department at Lahey Clinic and the services they provide. During my time there I would like to participate in an active learning environment where I am allowed to not only observe patient interaction with the health professional but to have hands on experience myself.

I would like to improve my skills in administering exercise testing, including graded exercise tests for both diagnostic and functional purposes. Patient's entering a cardiac rehabilitation program has usually had a myocardial infarction or other serious cardiac issue. I would like to observe and learn about the entire rehabilitation process, beginning when a patient enters the clinic and ending when they are discharged. To achieve this I would like to follow a patient, or several patients, from the initial exercise tolerance testing, throughout their program, and until they have successfully moved throughout the phases of rehabilitation.

Throughout the treatment plan patients meet with many health professionals in different fields that work together to achieve a satisfactory level of rehabilitation. That being said, in this setting, it is important to have good interpersonal skills with all kinds of people and to be understanding of what they are going through and where they have

come from. I want to learn how to work with the patients while maintaining a proper bedside manner throughout many different situations. I also wish to make strides towards becoming a source of motivation and encouragement for patients struggling to meet their own goals. Similarly, I would like to learn how to work in a professional environment. I have never had a job experience working directly with the patient and professional staff. Working directly with the doctors, nurses, and other staff members will help me strengthen my interpersonal skills and help me broaden my professional horizon.

Working in medical records has given me an insight to all the testing and evaluations that are necessary and has give me an idea of what is expected, however actually participating in the process and observing daily policies and procedures will give a better understanding. I would like to incorporate some of the skills I have learned here at Fitchburg State in my position as a student intern. I have learned how to obtain blood pressure, heart rate and resting EKG, I would like to apply these skills in a clinical setting. Furthermore, I intend to develop my ability to develop exercise prescriptions and make adjustments as patient's progress. Upon completion of my internship I wish to feel confident in developing and prescribing exercise programs for Cardiac Rehabilitation patients.

The purpose of the entering stress test is important to calculate the rate pressure product from their heart rate and systolic blood pressure. This gives the professional the point of where the patient cannot be pushed past without being symptomatic. This is an impotiant tool for when prescribing the exercise for the patient in order to refrain from causing more damage to their heart. It is important to monitor the amount of chest pain

they experience while in the care and know the indicators of ceasing testing and exercising. I want to learn about the certain medications that cause contradictions with exercise.

I also wish to observe more advanced procedures such as cardiac catheterizations and echocardiograms. I feel that this will give me an insight to what some patients have gone through. This would also be useful for me to help with my understanding of cardiac rehabilitation system's way of diagnosing the patients by actually seeing first hand where the issue is in the heart. If I chose to further my education I find that this would help me grasp a better understanding of the way the cardiac system works to create collateral vessels around blockages.

I would like to learn how to accurately educate patients about the specific diseases and events that caused their cardiac problems and counsel patients about risk factor modification. Perhaps after weeks of learning toward the end of my internship I could even lead one of the educational classes that Lahey has once a week for the patient and their family depending on the subject matter. If not I would like to be involved in collecting and writing the subject matter to be presented.

Overall I am looking for a positive environment where I can learn to use the skills I have acquired so far and strengthen my ability to work with others and learn from them. I have always been a hands on kind of learner and I am hoping to walk away with a good experience that will help me decide what my career goals are after graduation.

Fitchburg State College
Exercise and Sport Science Internship Program
Internship Evaluation

Student Name: */f/;I /ofC₁₇*

Affiliate: *kie/ C/n,a/*

Affiliate Supervisor: */l:/t it? \ ('Jo/e*

Date of Evaluation: *X:o2t;-/0* Semester: *yubj-* Year: *dJ) d*

Midterm: _____ Final: _____

Kindly evaluate the named student who worked at your agency over the past semester. We would appreciate your brief comments within the four evaluation areas. We urge you to evaluate the student's performance together with him/her. Please be objective, compare the student's performance with other students of comparable academic preparation and training, and with other employees serving similar positions.

- I. Preparation/ Work Skills: (General academic preparation; skills & laboratory techniques; ability to conduct testing procedures; calibrate & maintain instrumentation; ability to collect, manage, interpret, & report data.) What were the student's strengths? In what areas was the student not adequately prepared? Was the student willing to learn/ did the student grow professionally? Was he/she a better worker at the end of the internship?

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- II. Work Ethic: Was the student dependable and reliable? Did the student complete assigned tasks on time? Was the student able to work independently? Did the student show initiative, industry & flexibility on the job? Did the student demonstrate ethical competency (trustworthy)?

*Kim demonstrated a good work ethic
 She showed a very professional manner
 and was always willing to do more.*

- III. Work Quality: What was the quality of the student's work in completed assigned tasks? Was the student able to think critically and creatively? Was the student able to apply basic knowledge to a task? Did the student pay attention to detail? Was the student able to review literature & bring new ideas to the job? Was the student able to meet expected standards of performance?

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It was a pleasure having Ken
with us this semester.

Final Grade (100% scale): *(please circle one)*

-)> The student has maintained a log of hours. A minimum of 240 hours is required for a 6 credit Internship.
-)> 70% of the final grade will be based upon the supervisor's evaluation.

Supervisor's Signature: - !. Cl...; ...17... ..8 : ,/..... =---- **Date:** 4-26-10

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■ agree ~~---~~ disagree

with my Supervisor's evaluation

Student Signature:



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Date: 4-29-10

Kimberly Logan
4-19-2010
Professional Interview

The person that I chose to interview was Brian Mullen. He has worked at Lahey Clinic for six years and is the Lead Cardiovascular Technician. The reason I chose to interview him is that over the past 4 months I have been completing my internship at Lahey

Clinic he has taken a lot of time to teach me about how to do stress testing. He is a nice man who had patience to show me everything from how to set the test up to what to look for during the test. I thought it would be interesting to hear more about him and how he decided upon this career.

Name: Brian Mullen
Title: Lead Cardiovascular Technician
Phone: 781744 8486

Where did you go to school? What Degree do you have?

Brian went to school at Bridgewater State College and graduated with a degree in Exercise and Sport Science.

What made you go into this field?

What made him go into this field was that he was very interested in the Anatomy of the human body and strength training and conditioning. He claims that he sort of found his way into this field after realizing he did not want to work with the athletes.

How long have you worked at Lahey?

Brian has worked at Lahey Clinic for 6 years total however, he left for two and started his own non clinical business in between and chose to come back instead.

What are the types and age of patients you deal with majority of the time, is it mainly the older population?

The age group is anywhere between 40's to 70's he says that it changes all the time. There is a huge variety in the patients because heart disease develops in people younger and younger now.

Can you describe a typical day?

A typical day for Brian is that he arrives at work around 6 in the morning before everyone else and opens everything up and gets the machines all turned out to warm up. He then gets all the orders prepared for the day and says that he completes

.between 8-10 stress tests a day. He admits that he bounces between nuclear tests, Stress Echo's, and Executive basically where ever he is needed.

Is this a positive atmosphere to work in? Do you like your job?

Brian says yes that he does like his job and the people that he works with, he would like to think that they are all a team and make this a positive place to work.

What do you find most challenging?

What Brian found to be most challenging was the ability to focus on all the different aspects during the test. This would be monitoring the blood pressure, keeping your eyes on the screen watching their EKG, and the actual patients on the treadmill. It can be a lot to handle making sure that you are aware of everything and know what to look for to end the test and what not.

What skills are vital for this career?

EKG interpretation is a must for this career and you have to have good personal social skills. It is important to know how to talk to people and make them feel comfortable with you.

Are you a member of or go to professional conferences to help you stay current with the changing sciences of your career?

No he is not a member of the professional conferences however; he does go to EKG reading/ training conferences every few months.

What do you find to be most rewarding part of your job? Is it the people?

Yes, He has met a lot of people and he always finds it rewarding when you do someone's test and it is positive to follow through with the patient that you helped figure out what the problem was. A lot of the time they will come back to see you and thank you for what you have done makes it feel rewarding that you have helped them in a small way.

Do you see yourself returning to school?

Yes soon he would like to go back to school for Health Care Management.

What is a quality you would say that is vital for people to have in this profession?

Brian says that in all health care professions it is important to have a great personality. To be easy going and make people laugh and are comfortable with you. In all honesty he admits that no one likes to go to the doctor and have tests done it helps to have the patient at ease and trust you.

If you could change one thing about your profession what would it be? Why?

If he could change one thing about this profession it would be to educate the ordering primary care doctors more about the tests that they are prescribing. Majority of the time they have to change test because it is not a good idea for the patient. He also admits that he would like the test to be wireless, for all the equipment to be wireless it would make things a lot easier.

What advice would you give someone entering the field?

The advice that Brian had for me is to never be afraid to ask for help. In this career it is important to go with your gut instinct and if you feel as if something is strange with their EKG always get a second opinion or if you don't feel comfortable administering the test alone get a witness. It is important to have good EKG interpretation skills that way you can catch something before causing the patient more stress by having a cardiac event in your care.

Kimberly Logan
Internship Reflection
May 4th, 2010

Dear Fitchburg State College Colleagues,

As you know I chose to complete my internship for Fitchburg State College with Jeanne Macdonald at Lahey Clinic Hospital in Burlington, MA. There, Jeanne is the manager in cardiovascular diagnostic services and oversees many nurses and technicians. The main academic aspect of this internship was to involve me in learning about the Cardiac Department. My expectations were for an active learning environment at Lahey Clinic where I was allowed not only to observe patient interaction, but also have a hands on experience myself. These are two things that I believe were fulfilled during my time here at Lahey.

The first step for this internship was for me to get a basic understanding of EKG set up and interpretation. For the first few weeks I was working in EKG observing and learning about the placement of the 12 leads, and what to look for within the EKG that should be marked alarming and brought to someone's attention. I then moved on to Stress testing where, over the course of four months I had the opportunity to observe many different testing types. These included, stress echo, exercise tolerance test, lexi scan, exercise SPECT, lexi PET scan, dobutamine stress echo, and TEE. For each of these different tests I learned about the preparation of paper work as well as the patients, and how to explain and administer the test to each patient and as you can imagine some are more invasive than others.

While at Lahey Clinic I also had the opportunity to observe a cardiac catheterization of a patient where they placed two stents in their LAD. I also went into the EP Lab and watched a cardio version, an implantation of an IED, and a cardiac ablation of a patient that had been in A-fib for a prolonged amount of time. During my time at Lahey Clinic I would have to say that I exceeded my expectations outlined in my learning contract, which I was also able to get the hands on experience that I wanted and I feel this eased me into the setting.

Upon completion of this internship I learned how to interpret EKG's, explain and administer different exercise tests, as well as what each test specifically is looking for. I learned how to have a professional manner when speaking to patients and making them feel comfortable. I learned this is one of the most important parts of this profession. The patient needs to feel comfortable in your care to put them at ease during the test that you are giving them. This was an obstacle that I was about to overcome. In the beginning however, I was nervous when talking to the patients and drew back, but toward the end I was comfortable and confident.

Another obstacle I faced was my interpretation of their EKG, over time I learned by looking at all of them especially in the cardiac rehab. I learned that after a major cardiac event that your EKG can look extremely different than what normal sinus rhythm, however it becomes that patient's normal. In the cardiac rehab I learned to have confidence in myself to teach the patients how to exercise again and when making decisions about intensity of exercise.

prescription. In the beginning, the patients would come to me very nervous and would be afraid to push themselves toward their goal. When they leave, my goal is to give the patient an understanding of their limits and how to gradually increase their workload with first duration rather than intensity. One issue I faced was that some patients wanted to push themselves more than others too quickly. They were in a hurry to do more and thought that if they did they did, they would get back to how they were faster. It was hard for me to get the patients to understand the importance of starting slow and working up to where they were before, if not past it, and how these things take time.

I was also able to observe Lahey's professional environment where doctors, dietitians, and nurses all work together, encouraging the patient daily to change their daily living activities to increase their well being. There are many steps that must be taken in order for these to be achieved. This begins with the patient's diet; a dietitian will introduce healthier eating habits to them. Then assessing the patients exercising abilities based on their entering stress test, they will prescribe an exercise plan for the patient. I learned that the exercise that the patient is expected to do following a cardiac event is symptom limited and based off a target heart from their entering stress test.

I also learned how important it is that the patient has a support group whether it is family, friends or you the health professional student. They need to hear that they can make it through the program and increase their life expectancy. I learned how to calmly explain the situation to the patient and keep a positive attitude the last thing you want to do is alarm the patient.

My definition of professionalism did not change too much from before. I still believe to consider yourself a professional it takes patience, knowledge of the subject matter, and having great interpersonal skills. I pride myself in having a lot of patience and I would like to say I am quite knowledgeable in the subject matter and **ill** continue to learn more. I feel that my interpersonal skills have increased from my internship, having been able to practice them in a professional environment.

My long term career goals have changed since entering Fitchburg State College. When I entered the exercise and sport science program *here*, I had planned to go to grad school to become a physical therapist which is what I have wanted to do ever since I could remember. After taking cardiovascular physiology, I realized my interest was in the heart and cardiovascular system, and working with patients who have had cardiac events and help them improve their overall well being. This is exactly what I have the chance to do at my internship and for now I accepted a position there being a stress testing technician. Ultimately I plan to return to school in a few years for my masters and I am considering cardiac rehab nursing.

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Jan 21

today I went in 7-1, I was given a tour of cardiac rehab gym & central. The crash cart, port & monitors wheel to do printouts in machines. program stretch

Treadmill
Bike
ergometer
weights
cool down

1999 code for keys
to patient files

C E S

4, 8, 12 opposite 3, 2, 1, 0

usually 0, 1, 2, 3
epidemic scale

F B S = glucose on Hemodynamics
important

* HDL 740

< 120 LDL < 100 (70) if attack
< 80 cholesterol < 200

Sat in and helped 2 exss classes

max PPI = 5
time = 1 hr

enter =

get weight
1x wk

hook up electrodes etc

to each name

print resting compare

take RHR + RBP

begin exss in target range from
their stress test

take BP / HR / RPE / time / watts during
exss & O₂ sat: if necessary

Rest
Blood sugar if
Diabetic

* practice
BP / O₂ / exss
pattning

Jan 21
for next wk I am expected to lead parents
through warm up -
weights -
cool down -

Warm up stretch → neck pauses
→ arm across + above
Chair squats?
→ slight lunges
→ slow twisting
→ high knees
→ side kicks
→ slide leg back

Weights

alt. up, side,
down
5x's each
do twice.

→ alternating arm lifts
→ above head
→ lat arm lifts
→ side elbow bends
→ squats
→ up on toes



week 2 Jan 25-29 20 hours (7-1)

Monday → followed cardiac rehab classes 7-9 am
the group w/ the new patient Beth
who I went on her entry evaluation.
• EKG reading took BP, HR on exss machines monitored
quiz given hr on machines from monitors.
• route stick lead weight lifting.
then from 9-10:15 I did EKG for outpa-
-ents and pre ops and one inpatient
then @ 10:30-1:00 I was back up in
the cardiac rehab gym with
two other groups of patients.

Tuesday → I did EKG's and paperwork w/
Sinovia (girl who trained me) on a lot
of patients from 7-10:15. From
10:30-12:00 I went upstairs in cardiac
rehab gym. Did BP, ~~HR~~ rpe, taught
a M patient Very smart doc
@ Bld. teaches Kinesiology
went over weight
lifting muscles
woman new in program how to
use machine treadmill. Lead weight.

Wednesday → I went up to cardiac rehab
gym from 7-9, taught 87 year old F
how to stretch & use treadmill @ 1mph
explained aerobic activity. did EKG's from
9:30-10:30. @ 9:00 I did an exss prescription
for a patient well into program for
home program a new target HR range
Back in rehab gym 10:30-1:00 led
weight lifting monitored HR/BP
met my long lost great uncle Frank
small world.

Thursday → I did EKG w/ Sinovia went to
educational lecture on Marfan
syndrome from 8-9:30. then I did

a few more EKG's. Then RN Pat gave me
a project for wk design poster
for program on risk factors. disease.

from 11:30-1:00 I went back
into rehab gym betri's class
monitored & led weights.



modification
outside
cannot
inside

Friday → I went to rehab gym 7-9 observe
Mike teach calf stretches to patient
monitored HR B/P. did not lead weights
prescribed exers for patient leaving
program Mathewson formula
new target HR R. taught Mike.
then 10-12 followed Aunt Melissa in
nuclear stress testing hook patient
up to machine leads check rest HR
B/P. listen to lungs → clear-okay
weezes - no way



"very persistent
cant get just
my O2"

1st patient pneumonia recently, asthma
weezing cardiologist says no to
test.

2nd patient in pet scan. not friendly
tough to get IV, not coherent
→ took 30 mins

agent used
Texiscan

IV important = injected w/ radioactive
medicine stimulates heart & breathing
as if exersing can be dangerous
for people w/ breathing issues
already. important to monitor
tech + nurse + doctor/fellow in
the room.

higher dose
→ (Robidolum) in pet room
stamibi → radioactive agent light up
heart in pet lab.

F-7-3, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

Monday → rehab gym 7-9 with patients monitoring
exercise. 9-12. I watch stress echo's. This is
what they give the patient a stress test
to at least 85% of predicted Max HR then
stop treadmill and lay on side to get
ultrasound of the heart's contraction and
chambers see blood flow at both exss &
rest. Then I went back to EKG's for a few

Tuesday → I went down to nuclear
medicine learned about the "exxi-
scan" test. How to read results
They inject patient w/ radioactive
agent wait 30min then inject the
drug into them stimulate exss then waves
off. Take scan of heart function before
and after. look for complete orange
in the scan of heart function no
discoloration or break. 10-30-11
went up to cardiac gym.

team meeting
10-30-11
10-30-11
10-30-11

Wednesday → rehab 7-9:30 then watched
stress echo and 2 regular stress
tests I went in and observed
someone getting w/ monitor.

Thursday → Stayed in EKG for a few
then witnessed another w/ monitor
then placed regular stress test. At
end of day went back up to cardiac
gym to help.

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Monday Feb 8th =>

cardiac gym 7-9:30 new patient
today gave him info about program
hookup to monitor stretch, exss
equipment free weights helped w/
ekgs watched 24hr monitor &
30 day monitor. Back up to gym
later afternoon

Tues Feb 9th

observed jexi scan test in nuclear
medicine. Then an dobutamine
stress test. This is when they
inject patient w/ dobutamine
every 3 minutes w/ ↑ dose (10, 30, 50mg)
↑ Rate and contraction of heart
↑ perfusion of blood. use echo to
take ultrasound pictures of V at
Rest, Peak & recovery

observed TEE. Moderately subdate patient
put probe down esophagus take pictures of V
patient had enlarged R side of heart 100
high % O₂ due to ASD & atrial septum defect
back flow in Missing 138cm. Then did a few
EKG's. At 10:00 went up to gym to help
out.

Wed Feb 10th

helped out in exss gym with rehab patients 7-9:30. Reviewed a Home program with a patient. Helped out in EKG and observed a few heart monitors being placed on patient. Observed stress-echo lead placement and test took a few BP's myself.

Thurs Feb 11th.

went down to nuclear medicine 7-10:45. Watched pharmacological stress testing prepped 2 patients. one slowly pharmacological the other treadmill with injection of radioactive cont. exss for one minute to get it through his system. His hands turned purple & face could be poor circulation. Scary. He had chest burning symptoms 5 out of 10. I reviewed his scan after he had an MI inferior damage on the scan. He was sent to Cath lab. then I went upstairs to stress testing and observed 4 test then upstairs in the gym at 11:45 class. I met a UMass Lowell student he does 12 hrs a wk for his practicum.

Friday Feb 12th

went up to gym 7-9:30. A quiet day helped out in EKG, cleaning monitors. Watched 2 stress tests one w/ Sherry and Maureen. headed up to the gym 11:45 for one more class.

Monday 15th

- off presidents day.

Tuesday 16th

11-2 table in lobby displayed my two posters. I made for heart week 12-1 I played nutrition jeopardy. Tuesday morning I helped in EKG for a few then watched ETT's with Brian. 8:30-10:30 then gym 10:45-11:45

Wednesday 17th

I helped in the gym from 7-9 with Lawrence nursing student then went to the educational symposium from 9-1, nutritionist, nurse, psychiatrist, social worker, Dr. Woods all made presentations for the new patients entering the rehab program.

Thursday 18th

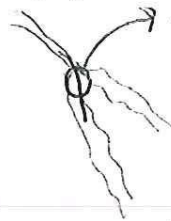
12-1 was a lecture on women's heart health, about myths that can ↓ your risks red wine & chocolate dark. In the morning 7-8 replaced disk in EKG machines on the floors w/ Audrey. From 8:30-11 I followed Brian around watching stress echos stress tests I prepped a female patient for ETT. I was nervous but did okay.

Friday 19th

I helped in the gym 7-8. Then I went to a lecture by Dr. Mirabach about reading nuclear testing results and about what each test

We do in cardiovascular testing is good for measuring. Then I followed ~~Valentin~~ over in the cardiac cath lab where an 83 Female was experiencing symptoms chest tight short of breath. They went through her radial artery found a blockage on R coronary artery and 2 in LAD inflated balloon then inserted a stent here inflated balloon more to press stent more only able to save one

she was ←
hypertensive
100.



After the procedure I went back to the gym from 11:45 - 1:00 help out with rehab patients. We had a new patient enter the program I explained the program to him & went over the stretches.

Monday Feb 22

I helped in the gym 7-9:30 taught new patient routine how to use machines. Followed Brian in stress echo then I followed back up to gym 11-1 to help nurses monitor O₂ BP & HR

Tues. Feb 23

I went into electrophysiology lab, I was the team they went over the different procedures prep room talk to patient prep patient. I watched them change battery in ICD in man up close.

to the table. smell burning skin,
then I watched them shock man's
♥ in A-fib back into normal sinus.
then prep & learned about next
surgery burn off A-v node, and put in
pace maker time was up had to
leave. Amazing tho.

Wed- snow day

Thurs Feb 25

Today I went down to nuclear
medicine. 8-10:45 helping w/
Tcxi scan & w/ treadmill tests
injecting radioactive agent
taking B/P and monitoring patients
11-1 I helped in the rehab gym
taught another new patient the
program.

Friday Feb 26

From 7-9:30 I helped w/
rehab classes. Slow day. 9:30-10:30
I helped w/ paperwork nutrition form
fill in. Then 11-1 I watched ETT &
stress echo - inpatient w/ Katie

Monday March 1

Today I helped in the gym
7-9:30 then 9:30-11 I watched
2 stress echos, 1 patient had aortic
stenosis bicuspidic aorta then
I helped in the gym 11-1 with
full classes 5 in each led weights

& monitored HR + BP gave exss
advice friendly w/ older patients

Tuesday March 2nd

I went down to nuclear
medicine observe Lexi scan & treadmill
test w/ tracer. I prepped patients w/
electrodes & EKG machine monitor
BP throughout, helped out in EKG's
observed 1 stress test

Wed March 3rd

I helped out in the gym 7-9:30
with patients then prepped and
watched stress test and an echo
then I went back upstairs to gym
to patients monitor BP reviewed home
program and monitored O₂ for few patients

Thursday March 4th

I helped down in nuclear 3
treadmill tests 2F 1M and 1 Lexi
scan M. One patient his HR would
not come back down he had a
tachycardia arrhythmia 130 had to
call cardiologist down to look
then I went back upstairs to the
rehab gym 11-1 busy worked
w/ Jackie started @ 1mph now up to
2.1mph very good. Ullwell students
were there as well.

Friday March 5th

Cardiac gym 7-9:30 then
helped out in EKG for a few. I
observed 2 stress tests and 1 stress
echo. I helped monitor some BP's
and prepped 1 stress patient (M) then
I went back upstairs to Cardiac
gym small class.?'s about PVC's
becoming every other beat bigemini
and (F) echo had an implanted
device that monitored her syncope
episodes.

Monday March 8th

I helped in cardiac rehab 7-9:30
setting patients up with rest EKG's and
BIP's. Explained home program to patient
explained importance of daily stretching
from 9:30-10:45 I helped w/ discharged
summary paperwork. then at 10:45-12:45
I helped w/ two more exercise classes
leading weight lifting group w/ patients.

Tuesday March 9th

From 7-11 I went down to nuclear
medicine and watched lexiscan test
with medicine and prepped and helped
administer treadmill test. One patient in
late 70's required extra help to stand
up on the treadmill. Melissa stand behind
her hold up. then 11-1 I helped w/
rehab classed 4 patients 1st class, 6 in
second helped Ulowell Student team
BIP takes while treadmill going.

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cardiac gym w/ classes ulowell student
was there both of us led weights

March 24th Wednesday

cardiac gym 7-9:30 then from
9:30-11 I helped w/ stress testing and
stress echos then I went back upstairs
to the gym 11-1

March 25th Thursday

The morning was spend in
nuclear stress testing until 10 then
I went to stress testing did test w/
danielle on an inpatient w/ recent
MI and 3 days ago cath done
modified bruce 16 mins no chest pain
evidence of ischemia post exs cke
then 11:00-1 I went back up to gym.

March 26th Friday

I went to 7 am rehab class
then at 8 I went into EP lab and
watched procedure done on a
patient w/ a-fib unmaintained did
procedure where cause scar tissue
on diff parts of heart that send impulses
related to a-fib to stop it. I was in
there till 11:30 long procedure
tedious work slow, I was not finished
doc has a lot of patients. to do this
11:45-12:45 I went up to rehab
class 5 patients, led weights and
monitored vitals during exs.

march 29th monday.

helped in cardiac rehab 7-9:30
take BP, HR, RPE assigning exss to
patients encouraging them to ↑ load
with either incline on treadmill for one
patient or level on bike From 9:30-10:45
I watched a stress echo test then went
back upstairs to gym 10:45-1 led weight
exss w/ patients.

march 30th tuesday

From 7-10:45 I helped in nuclear
medicine 3 treadmill tests and 1 lex
scan, this test needed to be reversed,
and 1 treadmill test patient vasovagaled
got very dizzy. Then 11-1 I went up to
gym work with patients one in particular
in noon class 12 M. leg fatigue easily needs
lot of attention .8mph mins on treadmill rest
5 min on bike rest 3 minutes on treadmill .8mph
modified weights, chair exss = marching and
leg lifts.

march 31st wednesday

I went up to the gym 7-9:30
helped w/ BP, HR & O₂ sats on 1 patient
who cannot hold their O₂ with exss.
led weight. then 9:30-11 I went to
stress testing IETT 1 stress echo. Went
up to gym 11-12 help out then
12 was staff meeting about EKG
placement it was announced I was gonna
join staff.

April 1st Thursday (♥)

Today I went down to nuclear medicine from 7-11 2 treadmill tests 2 lexis. Used different isotope called thallium stress pics first only 3 minutes for recovery then wait 3 hrs then do resting scan. Then I went back up to gym 11-1 helped out w/ BP and monitoring patients. 1 patient M early 50's was working out at home 2 hr work out on bike + 2 hrs on treadmill I had to explain calbo storage disappears and glycogen depletion after so long you burn muscle instead of fat

April 5th Monday

I went up to the gym 7-9:30 helped w/ patients led weights. Then 9:30-11 I helped w/ 2 stress tests taking BP's watching EKG then 11-1 I went back up to rehab.

April 6th Tuesday

Today I went down to nuclear testing from 7-10:45 watched 2 lexis I prepped the patients and 1 stress test. Then I went back up to gym 11-1 talked about home program w/ a patient my 72 year old general fell out of bed cuts bruises payed close attention to him again did chair exss with him again trying to help him gain endurance.

April 7th Wednesday

helped in rehab gym 7-9:30
quiet morning not full class. then
09:45-11 I helped out down in nuclear
for a little while then back up to gym
assisting nurses.

April 8th Thursday

I went down to nuclear prepped
1 lexiscan patient then after test I
went upstairs met w/ Jeanne about
job hopefully then 2 ETTs I prepped
patients took BP's monitored EKG's
then at 11-1 I went back up to rehab
gym did ankle weight exss with the
general and did modified weight showed
U Lowell students how to read EKG's

April 13th Tuesday

I went to nuclear stress testing
7-10:30 3 treadmill tests, 1 lex then I went
upstairs to stress testing watch Joe's exit
stress test w. 30 minutes. severe SOB stop
36 test one of my rehab patients. Then I went
up to gym from 11:30-1 BP's/RPE's led
weights.

April 14th Wednesday

I went to the gym 7-9:30 then
I went down to stress testing prepped
1 ETT watched secco then I went back
up to the gym 11-1 full classes 2
new patients 1 in early 30's watched
Beth's exit stress test to 40 mins double time

April 15th Thursday

In the AM I went to nuclear busy day 2 treads 3 lexiprepped/ran 2 of them with melissa then I went up to the rehab 10:45-1:00 Beth graduated, I been with her since entrance eval. Happy as ever for all our help. Then led weights w/ both groups. Learned about pleural effusion results of surgery for surgery.

April 16th Friday -

From 7-9:30 2 full classes in the gym Mike was up there to help led weights, he did stretchers. Very Busy morning then I went down to stress testing & secco I took BP's ran test w/ Brian then I went down to nuclear prepped 2 patients explained test. Interviewed Brian about his job/career. Then I went back to Rehab Gym helped with the class until 1.

April 19th Monday

no school. patriots day.

April 20th Tuesday

I went down to nuclear testing from 7-11 I prepped 2 lexiscan medicine induced exercise stress test w/ scan then 2 treadmill test prepped & administered. Then from 11-1 I helped out in the gym I had a patient Steve graduate then I took the general through his program

giving him extra attention due to his low exercise capacity. I also led weights with the class & assisted the Lowell student.

April 21st Wed.

I helped in the gym 7-9:30 I had a new patient to take through the program stretching monitored exss close since 1st day exercise prescription of target HR of patient. Mac then at 9:30 I went to stress testing watched 1 stress test w/ Kait & depression many leads read by doctor then I watched 1 stress echo and 11:15 I went back up to gym to help out until 1 monitoring B/P & HR lead weights. Renewed a home program.

April 22nd Thursday

From 7-11 I helped in stress testing I watched 3 ett 1 stress echo I prepped 2 ett's. then @ 11 I went up to the gym to help until 1 the general was in again gave him all my attention 12-1 I w/ modified squats & weights chair exss & Bike time 5 to 7 mins. 3 2:30 minute sessions with 1 minute breaks.

April 23 Friday

I helped up in the gym 7-9:30 two full classes 5 patients Mike was up to help as well 1 patient was pushing himself too hard BP 180ish/100 took his resistance down on the bike

I lead the weights & mike the stretches
then I followed him in stress testing
for 2 EPT's I stress echo just observed &
took B/Ps had a very young man lots
of dizziness & tingling in fingers & legs
no EKG changes to show why. I was
given a tour of executive health by
Susan very fancy area brings a lot of
to hospital. Then I went back up to
gym 11:45-1 to assist small class 3
patients

Apr 126th Monday

from 7-9:30 I helped in gym full
classes I led weights monitored B/P's RPE HR
& exers when called for then 9:30-11 I went
down to nuclear helped prep patients (2) for
treadmill tests. I have ST depression 2mm
took a white to come back up no c/p
SOB tho. then 11-1 I helped in rehab Dr. Wigmer
came up at 12:30 to observe me &
meet the nurses she seemed very pleased,
I took her down to see Jeanne Macdonald
where we discussed how I did & how
they were hiring me! I was there till
about 2:30 & said my good-byes

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For over six decades, the Paralyzed Veterans

of America supported cutting-edge research to improve the lives of people with spinal cord injury or disease.

NEW YEAR'S DAY

○ Last Quarter

☾ New Moon

☾ First Quarter

☾ Full Moon

MARTIN LUTHER KING
JR.'S BIRTHDAY
(Observed) (/;;

11

12

26

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30

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
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						30
	25					

Flower: Carnation

Site Supervisor P. Joynt total 218

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28	<p>Over the past year, Paralyzed Veterans of America conducted 19,782 interviews with veterans, filed over 22,655 claims and assisted veterans with obtaining \$162 million in benefits. Through the network of 65 offices, Paralyzed Veterans of America represents over 28,000 disabled veterans.</p>				<p>JANUARY 2010</p> <table> <tr><td>S</td><td>M</td><td>T</td><td>W</td><td>T</td><td>F</td><td>S</td></tr> <tr><td></td><td></td><td></td><td></td><td>1</td><td>2</td><td></td></tr> <tr><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> <tr><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td></tr> <tr><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td></tr> <tr><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td></tr> <tr><td>31</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table> <p>MARCH 2010</p> <table> <tr><td>S</td><td>M</td><td>T</td><td>W</td><td>T</td><td>F</td><td>S</td></tr> <tr><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr> <tr><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td></tr> <tr><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td></tr> <tr><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td></tr> <tr><td>28</td><td>29</td><td>30</td><td>31</td><td></td><td></td><td></td></tr> </table>		S	M	T	W	T	F	S					1	2		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31							S	M	T	W	T	F	S		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
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Birthstone: Amethyst

www.SupportVeterans.org

Flower: Violet

February

Handwritten signature

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FEBRUARY 2010						
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Time Begins	New Moon 14	15	16	17	18	19
ST. PATRICK'S DAY						
21	22 ☾ First Quarter	23	24	25	26	27
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Every March, members of the Paralyzed Veterans of America from across the country converge on Capitol Hill to meet with Senators and House of Representatives to discuss healthcare funding and veterans' benefits.

APRIL 2010						
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April

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Paralyzed Veterans of America and its 34 chapters celebrate Paralyzed Veterans of America Awareness Week April 11th to 17th. Go to www.SupportVeterans.org for more information.			MARCH 2010 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1	2	3
4	5	() Last Quarter	6	7	8	9
EASTER SUNDAY	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

Birthstone: Diamond

www.SupportVeterans.org

Flower: Sweet Pea

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Exercise and Sport Science Self Study Plans for Change

As a result of the self-study, the faculty of the Exercise and Sports Science (EXSS) department has identified a number of areas for improvement within the department. These changes will improve classroom instruction and allow us to serve our majors and the undergraduate Health and Fitness requirement at a level that is expected by the students and administration.

Program Content and Organization

The EXSS Major has two concentrations, Clinical Exercise Physiology and Fitness Management. Initially it was believed that the Fitness Management concentration would have broader appeal and draw more students since its focus is on commercial fitness. Surprisingly this was not the case. The number of majors in the Clinical Exercise Physiology concentration greatly exceeds our Fitness Management Track. The unexpected growth in the Clinical Exercise Physiology concentration is the result of students using the concentration to satisfy prerequisites for continuing their education in Physical/Occupational Therapy. It makes sense for the department to begin investigating the feasibility of adding a Sports Medicine concentration to the major that is specifically designed to meet this need.

Many of our majors are also pursuing careers as Strength and Conditioning Coaches. It has been suggested that we add a track that specifically addresses this need.

Course Changes and Additions

The department would like to consider the creation of a Pre-Major in EXSS. Under this program, students who successfully complete the courses Anatomy and Physiology I & II, and Introduction to Exercise Science would then be eligible to enter into the EXSS major. Successful completion of the course is defined as a final grade of 2.5. The department sees this as a necessary step to reduce student attrition and ensure that the student is entering into the major for the right reason.

Each year students in Exercise Physiology II conduct a research project as part of their course work. In the past, some students have submitted their work at the undergraduate research conference and presented at regional sports medicine conferences. Exercise and Sports Science majors should take a class in Research Methods and Applied Statistics leading up to these projects. The course would prepare them better for the project and would be a meaningful addition to their academic transcript as they apply for graduate school.

The department is also considering the merger of the courses EXSS 3020: Biomechanics and EXSS 4025: Motor Learning and Control into one 4 credit course with a laboratory requirement. There is considerable overlap in the material and many Universities are currently teaching it this way.

The course EXSS 2050: Functional Anatomy is currently a lecture class. The faculty have been developing creative activities that facilitate the learning of complex material. However, this has been taking away from lecture time. The department will investigate the feasibility of adding a laboratory requirement to this course so that the

activities can be included without compromising lecture time. This would require changing EXSS 2050 into a 4 credit course.

For the new concentration in Strength and Conditioning we will need to add a new course titled Techniques of Strength and Conditioning. This course will teach students the strength and conditioning techniques that are commonly used in the field, and teach students how to teach the exercise to others.

Internships

Students majoring in Exercise and Sports Science are required to take a six-credit internship or apprenticeship. In the past we have had students participate in internships at hospitals, fitness centers, research labs, and activities at the Fitchburg State University Recreation Center. As the EXSS major continues to grow we need to dedicate an individual for the coordination of internships. Release time for the coordinators teaching load should be considered. An alternative approach would be to hire a part-time faculty member for the purpose of coordinating internships. Exercise and Sports Science faculty also coordinate apprenticeships with students. Apprenticeships are typically offered for 3 or 6 credits. The amount of time the faculty member spends working with students during apprenticeships meets or exceeds the amount of time coordinating a single internship, and a similar work reduction should be allowed for such efforts.

Department Organization

Presently, full time EXSS faculty includes four tenure track assistant professors, three associate professors, and one full professor. There has been an increase in student enrollment for the college and therefore an increased demand for courses that satisfy the Liberal Arts and Sciences Health Fitness requirement. The EXSS department has also seen a rapid increase in the number of majors in Exercise and Sports Science. We are currently offering multiple sections of core courses, during both semesters, for the major.

The University has been supportive. However, in order to meet the increasing demand additional faculty will be needed. We have three adjunct instructors that teach courses to satisfy the Health and Fitness requirement. More adjunct instructors or full-time faculty are needed if we hope to have enough seats available so that all incoming freshman will satisfy the Health Fitness requirement in the first year.

In summary, the department will need two additional adjunct faculty (for a total of five) and one additional full time tenure-track positions (for a total of nine) in order to meet the needs of the students and the department in the near future.

Policies and Procedures

During the academic year 2011-12 the EXSS department composed a Departmental Handbook. The handbook includes departmental specific policies on GPA requirements and the inappropriate use of technology. The handbook also includes policies that are governed through the contract such as committees and Department Chair voting. This manual will be reviewed annually each spring.

Resources

The EXSS department was fortunate to be the recipient of dedicated, newly renovated space at 155 North Street, including new offices, and additional lab space.

Our current laboratory is equipped with modern tools for the assessment of human physiological function, however it does need additional equipment and the new lab space will need to be equipped as well. For example, the laboratory does need a tool to assess the biomechanical aspects of human motion. This includes high speed motion filming, and the computer generation of biomechanical models.

It is also recommended that EXSS department have a dedicated fitness facility for use as a “laboratory”. The Recreation Center usage has increased tremendously over the past five years. The fitness center and recreation center space is used throughout the day by students and faculty. Often, when a class requires the use of the fitness center it overburdens the space. Patrons become discouraged and frustrated by the lack of equipment availability. At times the fitness center is filled beyond its capacity, which creates an unsafe environment for everyone. The department can’t teach exercise without a fitness center. Moreover, the existing facility is inadequate in terms of the equipment available. To start a Strength and Conditioning concentration we will need a facility that is conducive to this type of activity and it should include equipment such as weight lifting platforms, power cages, and a plyometric conditioning area. Also, more recently athletic teams have been using the recreation space during class hour’s further limiting areas that can be utilized for academic purposes.

Resources are also needed for professional development. Exercise Science is a rapidly changing field. The faculty needs to be kept abreast of changes within the field. Attendance at national conferences for this purpose is paramount. Attending conferences also presents opportunities for networking and establishing internships sites. Professional development is also a requirement for tenure and promotion.

During the review period, the department budget requests have been met. As the department grows the budget should increase a commensurate amount to meet the increase demand placed on resources.

Department of Exercise and Sports Science
Self-Study

AY 2012 - 2013

Department Resources

Space

The Exercise and Sport Science Department was relocated from the Recreation Center, completed in Summer 2000, to newly renovated offices at 155 North Street in January 2011. The Recreation Center still houses the Exercise Science Laboratory, two classrooms on the second floor, and shared space such as a gymnasium, indoor track, swimming pool, dance studio, racquetball courts, locker rooms, and fitness center frequently used for teaching courses in the major.

Office space

Newly renovated office space at 155 North St. was completed for department relocation for the start of the Spring 2011 semester. The facility will eventually have two floors available for department use, but currently (as of March 2012) only the first floor is available. The first floor space includes a Department Chairperson office, Department Secretary office, and nine other faculty offices. Each office includes workspace, a telephone, file cabinets, bookshelves, and network Ethernet/wireless access to the FSU campus networks. The building also includes a conference room that seats 10, an office supply room with print/copy/fax (see technology) access to EXSS Department members, and a kitchenette/break room with a full-size refrigerator, sink, microwave, coffee machine, counter space, cabinets for food storage, and a water cooler.

Upon completion of second floor renovation at 155 North St., we will have additional Exercise Science Laboratory space to supplement the Recreation Center lab. Along with the lab space, current floor plans call for the second floor to include a lobby, departmental storage space, and a fully network-accessible computer lab.

Support Staff

We have a full-time secretary (Clerk V) who works 37.5 hours per week. We also have three work-study positions available to assist with office tasks.

Laboratory and Technology Resources

Fitness Center: Shared resource with Recreation and Athletics

- Cardiovascular exercise equipment, treadmills, bikes, ellipticals
- Free weights – Olympic benches, racks, barbells, dumbbells, plates
- Strength circuit machines
- Smith machine
- Universal cable pulley/row/lat pulldown combo

Laboratory Resources

- (2) Metabolic Measurement Systems
- Electronic Cycle Ergometer
- Monarch Cycle Ergometers
- Q-710 ECG Stress Test Monitor
- Bosch EKG Analyzer
- Motor Learning Equipment
- Pulse Oximeter
- Biodex Isokinetic Dynamometer and Rehabilitation unit
- Lactate Analyzers – (2 lactate plus meters)
- Biopac Physiologic Monitoring System
 - Surface electromyography system
- Quinton Treadmill
- Spirometer w/accessories
- Force Plate
- (3) Computers
- Supplementary Lab equipment such as:
 - Skinfold calipers (9 Lange + 16 others)
 - BIA Bodyfat analyzers(2 old, 2 new)
 - Tanita Body Fat Analyzer Scale
 - Weight scale
 - Anthropometrical instruments
 - Blood pressure equipment
 - (2) Dual stethoscopes
 - (18) stethoscopes
 - (11) sphygmomanometers
 - (1) moveable blood pressure cart
 - (2) Intellisense automatic blood pressure monitors
 - Hand grip dynamometers
 - Flexibility boxes
 - Stopwatches
 - Heart Watches & Heart rate monitors (9 Seiko, 5 polar)
 - Pedometers
 - Goniometers (8 metal, 8 plastic)
 - Anatomical charts
 - Skeleton models (3 full body, 1 heart model, 1 leg muscle, 5 box of bones)

- Fat replicas
- NASCO food replica kits

Strength and Conditioning Resources located in storage area adjacent to gymnasium.

- (3) Parachute Resistance Systems
- (1) Speed Trap Electronic timing system
- (1) Overspeed Assisted Sprint Trainer
- (1) Vertec Vertical Jump Tester
- (2) Weighted Vests
- Agility testing/training supplies
 - Assorted cones
 - (1) Agility Ladder
 - Mini Hurdles

The Recreation Center also includes a gymnasium, dance studio, indoor track and pool, which are available to the Exercise and Sport Science department while classes are in session.

Technology

Exercise Science Laboratory

The Exercise Science Laboratory is equipped with metabolic and cardiovascular testing equipment for the measurement of human physical capacity and health.

Media Cart

The Exercise and Sport Science Department has a multimedia cart for instructional use. The media cart includes a high-resolution projector, Dell Optiplex laptop computer, high-resolution VCR, and sound system.

Classroom Technology

Classrooms are equipped with Tier 1 technology “Black Boxes” which include a high-resolution projector. Within the boxes, there is a thin client, DVD player, VCR and auxiliary laptop computer input (with internet access) as well as auxiliary sound input.

EXSS Department DVDs

These DVDs are available to be signed out through the EXSS Department:

- Super Size Me
- Eater Beware: *From Chemical Stews to Organic Gardens*
- Obesity and the Relative Role of Exercise and Genetics
- Exercise Programming for Special Populations: *Recent Advances*
- Heart Disease in America: The Hidden Epidemic
- Food, Inc. (2 copies of this DVD)
- FAT: What No One is Telling You (2 copies of this DVD)
- The Forgetting: A Portrait of Alzheimer's
- Depression: Out of the Shadows
- The Truth About Cancer
- The English Surgeon
- Worried Sick (Scientific American Frontiers)
- The New Medicine
- Anatomica
- Diet and Disease in Modern Society
- King Korn

Library Resources

The Exercise and Sports Science Department is designed to foster healthy and physically active lifestyles and prepare students professionally in program concentrations related to their major areas of study. The Library holdings include materials that deal with human movement, human conditioning, and psychomotor development. The holdings also include biomechanics and kinesiology, exercise physiology and sports medicine, sports psychology, motor learning, diet and nutrition, and ergonomics.

Books and periodicals can be located in the [Library Catalog](#) under the following subjects or can be found by going to shelves and looking under the call numbers:

- Dancing GV1580-1790
- Diet TY361-641
- Diet & Nutrition RM214-224
- Exercise, Weight Control RA781-784
- Games & Amusements GV1199-1570
- Kinesiology & Corrective Therapy RD795-811
- Motor Learning/Sense & Sensation BF231-299
- Movements QP303-348
- Nutrition QP141-285
- Physical Training GV200-556
- Physiology QP1-139
- Recreation GV1-199
- Rehabilitation & Physical Therapy RM695-845
- Sports GV557-1198
- Sports Medicine RC1200-1245

Print Resources

- Atlas of Men: a Guide for Somatyping the Adult Male at All Ages **Ref.GN60.S44**
- Color Atlas of Human Anatomy **Ref.QM25.M23**
- Complete guide to sports injuries **Ref.RD97.G75**
- Dictionary of the Sport and Exercise Sciences **Ref.GV558.D53**
- Gray's Anatomy **Ref.QM23.2G73**
- Handbook of Social Science of Sport: with an International Classified Biography **Ref.GV706.5.H33**
- Kirby's Guide to Fitness and Motor Performance Tests **Ref.QP301.K55**
- Physical Education Handbook **GV361.P49 1992**
- Standard Nomenclature of Athletic Injuries **Ref.RC1206.A5**

eBooks

- [Human Body Book](#)
- [Mosby's Dictionary of Medicine, Nursing, & Health Professions](#)

Selected Journals in print in Library holdings:

- ACSM's Health and Fitness, (1998 – current)
- Journal of the American Dietetic Association, v.43-104 (1963-2004)
- American Journal of Clinical Nutrition, v.31- (1978 – current)
- American Journal of Health Behavior, v.20-28 (1996-2004)
- American Journal of Sports Medicine, v.9-33 (1981-2005)
- British Journal of Sports Medicine, v.15-37 (1981-2003)
- Canadian Journal of Applied Physiology, v.18-28 (1993-2003)
- Clinical Kinesiology, v.42-55 (1988-2001)
- Contact Quarterly, v12 1978 – current
- Dance Magazine, v. 31-42 (1957-1968) on micro, (1985- current) in print
- International Journal of Physical Education, v.XV-XL (1978-2003)
- JAMA: Journal of the American Medical Association v.173-293 (1960-2005)
- Journal of General Physiology, v.59-132 (1972-2008)
- Journal of Health Education, v.22-31 (1991-2000)
- Journal of Leisure Research, v.1-35 (1969-2003)
- Journal of Motor Behavior, v.1-38 (1969-2006)
- Journal of Nutrition Education, v. 1-8 (1969-1976), v.13-33 (1981-2001)
- Journal of Physical Education, Recreation, and Dance v.52-74 (1981-2003)
- Journal of Sport Behavior v.3-25 (1981-2002)
- Journal of Sports Medicine and Physical Fitness (1981-83, 1985, 1988-2007)
- Journal of Sports Sciences v.4-23 (1986-2005)
- Journal of the Int. Council for Health, P.E., Sport and Dance, v.25-38 (1988-2002)
- Medicine & Science in Sports and Exercise (1980-current)
- New England Journal of Medicine v.244-352, (1951-2005)
- Nutrition Reviews v.1-60, 62 (1942-2002, 2004)
- Nutrition Today v.1-11 (1966-76), v.13-41 (1978-2006)
- Outside v.14- (1988 – current)
- Parks and Recreation v.1-26 (1966-91)
- Perceptual & Motor Skills, v.20-107 (1965-2008)
- Physician & Sports Medicine, v.1-33 (1973-2005)
- Research Quarterly for Exercise and Sport, v.1-73 (1930-2002)
- Sports Medicine (Auckland, NZ), v.4-33 (1987-2003)
- Strength and Conditioning, v.21- (1999- current)

Electronic Journal Access Databases:

- [Academic Search Premier](#) Academic multi-disciplinary database; full text articles in all fields.
- [Business Source Premier](#) Provides citations to the business aspect of physical fitness.
- [Expanded Academic ASAP](#) Scholarly journals, news magazines, and newspapers in all disciplines.
- [Health Reference Center Academic](#) A database offering indexing, abstracting and full-text to articles on fitness, pregnancy, medicine, nutrition, diseases, public health, occupational health & safety, alcohol & drug abuse, HMOs, prescription drugs, etc.
- [Health Source: Consumer Edition](#) Authoritative information on health-related questions.
- [Health Source: Nursing/Academic Edition](#) Scholarly full text journals focusing on many medical disciplines.
- [Medline](#) Authoritative medical information on medicine, nursing, dentistry, veterinary medicine, the health care system, pre-clinical sciences, and more.
- [PsycARTICLES](#) Full-text, peer-reviewed scholarly and scientific articles in psychology.
- [PsycINFO](#) Provides indexing & abstracting to journals in the field of psychology and related fields since 1887. International in scope, it includes over 1,500,000 records, updated weekly.
- [PubMedCentral](#) The National Library of Medicine's digital archive of life sciences journal literature.
- [SPORTDiscus](#) Provides citations and abstracts for journal articles, reports and websites relating to sports medicine, sports psychology, exercise physiology, biomechanics, coaching and training, physical education, equipment, and recreation. Include: Citations and abstracts, full text links.

Selected Exercise and Sport Science Journals available through Library:

- [Adapted Physical Education Quarterly](#) (available online via [SPORTDiscus](#))
- [American Journal of Sports Medicine](#) (available online via [Academic OneFile](#), [Educator's Reference Complete](#), [Expanded Academic ASAP](#), [General OneFile](#), [General Reference Center Gold](#) and [Health Reference Center Academic](#))
- [Dance Magazine \(NY\)](#) (available online via [Academic OneFile](#), [Biography Resource Center](#), [Expanded Academic ASAP](#), [General OneFile](#), [General Reference Center Gold](#), [Academic Search Premier](#) and [MasterFILE Premier](#))
- [Exercise and Sport Sciences Review](#)
- [JAMA: Journal of the American Medical Association](#)
- [Journal of Motor Behavior](#) (available online via [Academic Search Premier](#), [Psychology & Behavioral Sciences Collection](#), [SPORTDiscus](#), [Academic](#))

- [OneFile](#), [Educator's Reference Complete](#), [Expanded Academic ASAP](#), [General OneFile](#), [ProQuest Education Journals](#) and [ProQuest Psychology Journals](#))
- [Journal of Physical Education, Recreation and Dance](#) (available online via [ProQuest Education Journals](#), [ProQuest Nursing and Allied Health Source](#), [Academic OneFile](#), [Educator's Reference Complete](#), [Expanded Academic ASAP](#) and [General OneFile](#))
- [Journal of Sport & Exercise Psychology](#) (also available online via [SPORTDiscus](#))
- [Journal of Sport Behavior](#) (also available online via [Academic Search Premier](#), [MasterFILE Premier](#), [Psychology & Behavioral Sciences Collection](#), [SPORTDiscus](#), [Academic OneFile](#), [Educator's Reference Complete](#), [Expanded Academic ASAP](#), [General OneFile](#), [ProQuest Nursing and Allied Health Source](#) and [ProQuest Psychology Journals](#))
- [New England Journal of Medicine](#) (also available online via [ProQuest Health Management](#), [ProQuest Nursing and Allied Health Source](#), [ProQuest Psychology Journals](#) and [ProQuest Science Journals](#))
- [Research Quarterly for Exercise and Sports](#) (also available online via [ProQuest Education Journals](#), [ProQuest Nursing and Allied Health Source](#), [Academic OneFile](#), [Educator's Reference Complete](#), [Expanded Academic ASAP](#), [General OneFile](#), [General Reference Center Gold](#) and [Health Reference Center Academic](#))
- [Strength and Conditioning Journal](#) (also available online via [SPORTDiscus](#) and [ProQuest Nursing and Allied Health Source](#))

Organizations:

[American Alliance for Health, Physical Education, Recreation and Dance](#) This site will also include links to the National Dance Assn. and the National Assn. for Sports and Physical Education. www.aahperd.org

- [AAALF \(American Association for Active Lifestyles and Fitness\)](#) This includes Adapted Physical Education information.
- [AAHE \(American Association for Health Education\)](#)
- [AAHPERD'S Research Consortium](#)
- [AALR \(American Association for Leisure and Recreation\)](#)
- [NAGWS \(National Association for Girls and Women in Sport\)](#)
- [NASPE \(National Association for Sport and Physical Education\)](#)
- [NDA \(National Dance Association\)](#)
- [American Association for Leisure and Recreation](#)

[American Medical Athletic Association](#) The Association is affiliated with the American Running Association. www.amaasportsmed.org

[ACHPER \(Australian Council for Health, Physical Education and Recreation\)](#)

[CAHPERD/ACSEPLD \(Canadian Association for Health, Physical Education, Recreation and Dance\)](#)

[National Association for Kinesiology and Physical Education in Higher Education](#)

[National Athletic Trainer's Association](#) - The Association's web site provides information on NATA publications, staff, committees, careers, test dates, etc. it also concentrates on the activities of the Association and athletic training as a career/profession. www.nata.org

[National Strength and Conditioning Association](#) www.nsca-lift.org

American College of Sports Medicine (ACSM) www.acsm.org

The following resources represent listed organizations, networks and reference websites linked through the Exercise and Sports Science research guide on the FSU Library website. Links are organized based upon certain specialty areas and subcategories within exercise science.

Athletics and Coaching Resources/Organizations:

Adapted Physical Education

- International Sport for All Federation <http://www.fispt.org/>
Multilingual home of the European Union Sport for All.
- Thematic Network of Adapted Physical Activity <http://www.kuleuven.ac.be/thenapa/> This European network is supported by the Director General, Education and Culture of the European Commission and will include information on activities, plans and organization of adapted physical education and sport in EC countries.

Exercise Fitness

- AFAA <http://www.afa.com/> Homepage of the Aerobics and Fitness Association of America.
- American Council on Exercise <http://www.acefitness.org/> An organization interested in certifying fitness trainers.
- Cooper Institute for Aerobics Research <http://www.cooperinstitute.org/> Includes an order form for the Fitnessgram.
- IDEA the Health and Fitness Source <http://www.ideafit.com/> A commercial organization devoted to professionals in the fitness business.

Athletics and Coaching

- About.com Sports Medicine <http://sportsmedicine.about.com/?once=true&> Contains over 700 Guide sites covering more than 50,000 subjects with over 1 million links to resources on the Net.
- Biomechanics World Wide <http://www.uni-due.de/~qpd800/WSITECOPY.html> Provides information on topics such as computer simulation, ergonomics, gait & locomotion, orthopedics, and prosthetics.
- Coaching Science Abstracts <http://coachsci.sdsu.edu/index.htm> An online journal put out by Brent Rushall at the University of California at San Diego.

These abstracts interpret research articles for practicing coaches and others interested in applied sport science.


- ICSSPE (International Council of Sport Science and Physical Education) <http://www.icsspe.org/> A coordinating body for over 24 international physical education/sport sciences organizations. Publishes the Sport Sciences Review, Sport Sciences Studies, and Technical Studies.
- Injury Control Resource Information Network <http://www.injurycontrol.com/icrin/index.html> Web resources dealing with injury control.
- Institute for the Study of Youth Sports <http://www.educ.msu.edu/ysi/> This is a unit of the Michigan State University Department of Physical Education and Exercise Science that was set up to research the benefits and detriments of participation in youth sports. Includes the newsletter "Spotlight on Youth Sports."
- NAKPEHE <http://www.nakpehe.org/> National Association for Physical Education in Higher Education
- National Institute for Sports Reform <http://www.nisr.org/> The organization is concerned with ways to improve the athletic and educational experiences of our young people. The institute deals with young sports programs, sports participation, competition, winning, and pressures placed on youths.
- Scholarly Sport Sites <http://www.ucalgary.ca/lib-old/ssportsite/> Created by a retired librarian at the University of Calgary who is also the president of of the North American Sports Librarian Information Network (NASLINE), a formidable web site of links related to sports scholarship.
- SIRC (The Sport Information Resource Center): A World of Sport Information <http://www.sirc.ca/> The center is dedicated to sport research, communication, and knowledge management. Includes articles, these and dissertations in all subjects related to sport, sport & exercise, sports medicine, etc.
- SportsLink <http://www.sportslink.org/> Directory offers an extensive, up-to-date sports information and education resource specifically for people interested in athletic training.
- SportsMed Web <http://www.rice.edu/~jenky/mednav.html> Designed for the endurance athlete but site includes information for all athletes.
- UNESCO Physical Education and Sport Unit <http://www.unesco.org/education/educprog/mineps/home.htm> "For um open to governmental bodies as well as sport organizations dealing with:
ethics in sports, sport and education, physical activities and sports for all, sport and the environment, sport and traditional games, sport and advancement of women, sport and the culture of peace, etc. A diversity of activities which aim at exploring the link between sport and major issues of the contemporary societies."

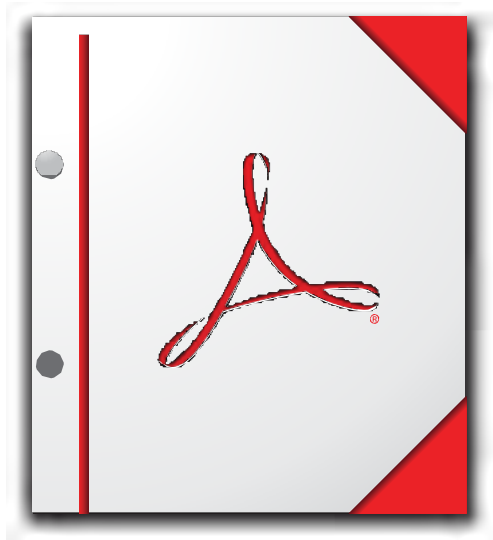
Sport Psychology Resources/Organizations:

Women/Gender Issues

- Association for Women in Sports Media <http://www.awsmonline.org/> A support network and advocacy group for women who work in sports writing, editing, broadcast and production, and public and media relations.
- Gender Equity in Sports <http://bailiwick.lib.uiowa.edu/ge/> Clearinghouse for reports on interscholastic or intercollegiate sport.
- Title IX <http://bailiwick.lib.uiowa.edu/ge/GEREDesign.html> Information about Title IX and other gender equity in sports issues.

Sport Psychology

- AASP <http://www.appliedsportpsych.org/> Association for Applied Sport Psychology 
- Canadian Society for Psychomotor Learning and Sport Psychology <http://www.scapps.org/> Promotes the study of and encourages the exchange of views and scientific information in the fields related to psychomotor learning and sport psychology.
- Enhanced Performance Systems <http://www.enhanced-performance.com/> A fee for service company, but they do have several articles and other information on performance enhancement available to the public.
- European Forum of Psychomotor Activities <http://www.psychomot.org/> Works to spread psychomotricity in all European countries and to develop cooperation between psychomotricians in all research levels.
- Exercise & Sport Psychology APA Division 47 <http://www.apa47.org/> The part of the American Psychological Association that deals with sport psychology.
- FEPSAC <http://www.fepsac.com/> European Federation of Sport Psychology
- Mind Tools <http://www.mindtools.com/> Informative site with information for the professional and layperson about sport psychology, stress reduction, problem solving, and more.
- NASPSA <http://www.naspsa.org/> North American Society for Psychology of Sport and Physical Activity
- Peak Performance Sports <http://www.peaksports.com/> For professional athletes, a consulting service to improve performance. There is a free e-mail consultation service for mental coaching and to answer performance-related questions.



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200810	@01141400	BS EXER	CEXP
200810	@01103583	BS EXER	CEXP
200810	@01110839	BS EXER	CEXP
200810	@01177956	BS EXER	CEXP
200810	@01125109	BS EXER	CEXP
200810	@01177336	BS EXER	CEXP
200810	@01175196	BS EXER	CEXP
200810	@01130890	BS EXER	CEXP
200810	@01175197	BS EXER	CEXP
200810	@01072043	BS EXER	CEXP
200810	@01079023	BS EXER	CEXP
200810	@01079192	BS EXER	CEXP
200810	@01134898	BS EXER	CEXP
200810	@01149228	BS EXER	CEXP
200810	@01117601	BS EXER	CEXP
200810	@01157111	BS EXER	CEXP
200810	@01177184	BS EXER	CEXP
200810	@01178529	BS EXER	CEXP
200810	@01099515	BS EXER	CEXP
200810	@01108678	BS EXER	CEXP
200810	@01130015	BS EXER	CEXP
200810	@01088180	BS EXER	CEXP
200810	@01109040	BS EXER	CEXP
200810	@01106125	BS EXER	CEXP
200810	@01103983	BS EXER	CEXP
200810	@01113463	BS EXER	CEXP
200810	@01110003	BS EXER	CEXP
200810	@01140713	BS EXER	CEXP
200810	@01129362	BS EXER	CEXP
200810	@01147217	BS EXER	CEXP
200810	@01133440	BS EXER	CEXP
200810	@01176770	BS EXER	CEXP
200810	@01112433	BS EXER	CEXP
200810	@01039682	BS EXER	FITX
200810	@01069342	BS EXER	FITX

200810	@01124754	BS	EXER	FITX
200810	@01075465	BS	EXER	FITX
200810	@01139790	BS	EXER	FITX
200810	@01043217	BS	EXER	FITX
200810	@01075884	BS	EXER	FITX
200810	@01139574	BS	EXER	FITX
200810	@01178633	BS	EXER	FITX
200810	@01182863	BS	EXER	FITX
200810	@01069685	BS	EXER	FITX
200810	@01025973	BS	EXER	FITX
200810	@01159063	BS	EXER	FITX
200810	@01142426	BS	EXER	FITX
200810	@01108289	BS	EXER	FITX
200810	@01129788	BS	EXER	FITX
200810	@01049251	BS	EXER	FITX
200810	@01121312	BS	EXER	FITX
200810	@01178084	BS	EXER	FITX
200810	@01126755	BS	EXER	FITX
200810	@01074260	BS	EXER	FITX
200810	@01112934	BS	EXER	FITX
200810	@01006262	BS	EXER	FITX
200810	@01108876	BS	EXER	FITX
200810	@01180552	BS	EXER	FITX
200810	@01125107	BS	EXER	FITX
200810	@01117736	BS	EXER	FITX
200810	@01176584	BS	EXER	FITX
200810	@01172961	BS	EXER	FITX
200810	@01156638	BS	EXER	FITX
200810	@01151641	BS	EXER	FITX
200810	@01103724	BS	EXER	FITX
200810	@01082515	BS	EXER	FITX
200810	@01075505	BS	EXER	FITX
200810	@01152027	BS	EXER	FITX
200810	@01137946	BS	EXER	FITX
200810	@01177540	BS	EXER	FITX
200810	@01154068	BS	EXER	FITX
200810	@01101811	BS	EXER	FITX
200810	@01116527	BS	EXER	FITX
200810	@01135971	BS	EXER	FITX
200810	@01179273	BS	EXER	FITX
200810	@01178786	BS	EXER	FITX

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200910
Fall 2008
BS
EXER
200910

@01191310 BS EXER

200910	@01129124	BS	EXER	
200910	@01191570	BS	EXER	
200910	@01143650	BS	EXER	
200910	@01175989	BS	EXER	
200910	@01189504	BS	EXER	
200910	@01190490	BS	EXER	
200910	@01190492	BS	EXER	
200910	@01191509	BS	EXER	CEXP
200910	@01174715	BS	EXER	CEXP
200910	@01137768	BS	EXER	CEXP
200910	@01174705	BS	EXER	CEXP
200910	@01127006	BS	EXER	CEXP
200910	@01106583	BS	EXER	CEXP
200910	@01108876	BS	EXER	CEXP
200910	@01132665	BS	EXER	CEXP
200910	@01175193	BS	EXER	CEXP
200910	@01150127	BS	EXER	CEXP
200910	@01161099	BS	EXER	CEXP
200910	@01141705	BS	EXER	CEXP
200910	@01137130	BS	EXER	CEXP
200910	@01132934	BS	EXER	CEXP
200910	@01140713	BS	EXER	CEXP
200910	@01171264	BS	EXER	CEXP
200910	@01181791	BS	EXER	CEXP
200910	@01110003	BS	EXER	CEXP
200910	@01170529	BS	EXER	CEXP
200910	@01141400	BS	EXER	CEXP
200910	@01177184	BS	EXER	CEXP
200910	@01170167	BS	EXER	CEXP
200910	@01178691	BS	EXER	CEXP
200910	@01133353	BS	EXER	CEXP
200910	@01142036	BS	EXER	CEXP
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200910	@01175196	BS	EXER	CEXP
200910	@01159745	BS	EXER	CEXP
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200910	@01134837	BS	EXER	CEXP
200910	@01194789	BS	EXER	CEXP
200910	@01151860	BS	EXER	CEXP
200910	@01177219	BS	EXER	CEXP
200910	@01176172	BS	EXER	CEXP
200910	@01156494	BS	EXER	CEXP
200910	@01144050	BS	EXER	CEXP
200910	@01177336	BS	EXER	CEXP
200910	@01103983	BS	EXER	CEXP
200910	@01072043	BS	EXER	CEXP
200910	@01172014	BS	EXER	CEXP

200910	@01194037	BS EXER	CEXP
200910	@01188338	BS EXER	CEXP
200910	@01157111	BS EXER	CEXP
200910	@01178616	BS EXER	CEXP
200910	@01130821	BS EXER	CEXP
200910	@01193136	BS EXER	CEXP
200910	@01187735	BS EXER	CEXP
200910	@01109374	BS EXER	CEXP
200910	@01030040	BS EXER	CEXP
200910	@01114600	BS EXER	CEXP
200910	@01190556	BS EXER	CEXP
200910	@01147217	BS EXER	CEXP
200910	@00206421	BS EXER	CEXP
200910	@01112429	BS EXER	CEXP
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200910	@01110839	BS EXER	CEXP
200910	@01111928	BS EXER	CEXP
200910	@01109040	BS EXER	CEXP
200910	@01104821	BS EXER	CEXP
200910	@01108343	BS EXER	CEXP
200910	@01093807	BS EXER	CEXP
200910	@01113126	BS EXER	CEXP
200910	@01069282	BS EXER	CEXP
200910	@01104333	BS EXER	CEXP
200910	@01190279	BS EXER	CEXP
200910	@01137670	BS EXER	CEXP
200910	@01134898	BS EXER	CEXP
200910	@01143349	BS EXER	CEXP
200910	@01184260	BS EXER	CEXP
200910	@01122588	BS EXER	CEXP
200910	@01175777	BS EXER	CEXP
200910	@01135605	BS EXER	CEXP
200910	@01196540	BS EXER	CEXP
200910	@01126604	BS EXER	CEXP
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200910	@01099515	BS EXER	CEXP
200910	@01175146	BS EXER	CEXP
200910	@01132531	BS EXER	CEXP
200910	@01112433	BS EXER	CEXP
200910	@01088180	BS EXER	CEXP
200910	@01126622	BS EXER	CEXP
200910	@01197216	BS EXER	CEXP
200910	@01188623	BS EXER	CEXP
200910	@01177956	BS EXER	CEXP
200910	@01108304	BS EXER	CEXP
200910	@01195628	BS EXER	CEXP

200910	@01182589	BS EXER	CEXP
200910	@01149228	BS EXER	CEXP
200910	@01183339	BS EXER	CEXP
200910	@01130015	BS EXER	CEXP
200910	@01179635	BS EXER	CEXP
200910	@01162881	BS EXER	CEXP
200910	@01136359	BS EXER	CEXP
200910	@01139176	BS EXER	CEXP
200910	@01120469	BS EXER	CEXP
200910	@01179273	BS EXER	CEXP
200910	@01176184	BS EXER	CEXP
200910	@01194572	BS EXER	CEXP
200910	@01196594	BS EXER	CEXP
200910	@01192661	BS EXER	CEXP
200910	@01178529	BS EXER	CEXP
200910	@01187457	BS EXER	CEXP
200910	@01124938	BS EXER	CEXP
200910	@01126729	BS EXER	CEXP
200910	@01176662	BS EXER	CEXP
200910	@01140417	BS EXER	CEXP
200910	@01179645	BS EXER	CEXP
200910	@01134838	BS EXER	CEXP
200910	@01182863	BS EXER	CEXP
200910	@01154643	BS EXER	CEXP
200910	@01108678	BS EXER	CEXP
200910	@01139349	BS EXER	CEXP
200910	@01109445	BS EXER	CEXP
200910	@01113463	BS EXER	CEXP
200910	@00195533	BS EXER	CEXP
200910	@01174373	BS EXER	CEXP
200910	@01144017	BS EXER	CEXP
200910	@01120259	BS EXER	CEXP
200910	@01133440	BS EXER	CEXP
200910	@01187736	BS EXER	EXER
200910	@01177540	BS EXER	FITX
200910	@01116527	BS EXER	FITX
200910	@01178786	BS EXER	FITX
200910	@01071102	BS EXER	FITX
200910	@01126755	BS EXER	FITX
200910	@01163271	BS EXER	FITX
200910	@01197519	BS EXER	FITX
200910	@01129788	BS EXER	FITX
200910	@01193071	BS EXER	FITX
200910	@01193744	BS EXER	FITX
200910	@01108289	BS EXER	FITX
200910	@00123017	BS EXER	FITX
200910	@01163868	BS EXER	FITX

200910	@01152027	BS	EXER	FITX
200910	@01180552	BS	EXER	FITX
200910	@01142426	BS	EXER	FITX
200910	@01125107	BS	EXER	FITX
200910	@01124754	BS	EXER	FITX
200910	@01117736	BS	EXER	FITX
200910	@01187358	BS	EXER	FITX
200910	@01082515	BS	EXER	FITX
200910	@01121312	BS	EXER	FITX
200910	@01137946	BS	EXER	FITX
200910	@01193213	BS	EXER	FITX
200910	@01180435	BS	EXER	FITX
200910	@01194618	BS	EXER	FITX
200910	@01139574	BS	EXER	FITX
200910	@01103724	BS	EXER	FITX
200910	@01176584	BS	EXER	FITX
200910	@01107821	BS	EXER	FITX
200910	@01075465	BS	EXER	FITX
200910	@01101811	BS	EXER	FITX
200910	@01191166	BS	EXER	FITX
200910	@01163888	BS	EXER	FITX
200910	@01172500	BS	EXER	FITX
200910	@01185301	BS	EXER	FITX

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201010
Fall 2009
BS
EXER

201010	@01212867	BS	EXER	
201010	@01215489	BS	EXER	
201010	@01063975	BS	EXER	
201010	@01129124	BS	EXER	
201010	@01194294	BS	EXER	
201010	@01191795	BS	EXER	CEXP
201010	@01127006	BS	EXER	CEXP
201010	@01179273	BS	EXER	CEXP
201010	@01142036	BS	EXER	CEXP
201010	@01211507	BS	EXER	CEXP
201010	@01205789	BS	EXER	CEXP
201010	@01203608	BS	EXER	CEXP
201010	@01116527	BS	EXER	CEXP
201010	@01139349	BS	EXER	CEXP
201010	@01196932	BS	EXER	CEXP
201010	@01184260	BS	EXER	CEXP
201010	@01212453	BS	EXER	CEXP
201010	@01159745	BS	EXER	CEXP
201010	@01176172	BS	EXER	CEXP

201010	@01215697	BS EXER	CEXP
201010	@01127388	BS EXER	CEXP
201010	@01214605	BS EXER	CEXP
201010	@01211350	BS EXER	CEXP
201010	@01207746	BS EXER	CEXP
201010	@01097247	BS EXER	CEXP
201010	@01187735	BS EXER	CEXP
201010	@01210426	BS EXER	CEXP
201010	@01218669	BS EXER	CEXP
201010	@01137130	BS EXER	CEXP
201010	@01189206	BS EXER	CEXP
201010	@01184767	BS EXER	CEXP
201010	@01191509	BS EXER	CEXP
201010	@01130821	BS EXER	CEXP
201010	@01215968	BS EXER	CEXP
201010	@01190492	BS EXER	CEXP
201010	@01150127	BS EXER	CEXP
201010	@01177184	BS EXER	CEXP
201010	@01195964	BS EXER	CEXP
201010	@01139176	BS EXER	CEXP
201010	@01206379	BS EXER	CEXP
201010	@01186489	BS EXER	CEXP
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201010	@01186134	BS EXER	CEXP
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201010	@01203567	BS EXER	CEXP
201010	@01103583	BS EXER	CEXP
201010	@01132934	BS EXER	CEXP
201010	@01149228	BS EXER	CEXP
201010	@01196594	BS EXER	CEXP
201010	@01196981	BS EXER	CEXP
201010	@01162881	BS EXER	CEXP
201010	@01174373	BS EXER	CEXP
201010	@01175193	BS EXER	CEXP
201010	@01171264	BS EXER	CEXP
201010	@01157111	BS EXER	CEXP
201010	@01140713	BS EXER	CEXP
201010	@01175196	BS EXER	CEXP
201010	@01130890	BS EXER	CEXP
201010	@01132531	BS EXER	CEXP
201010	@01188338	BS EXER	CEXP
201010	@01108678	BS EXER	CEXP
201010	@01175777	BS EXER	CEXP
201010	@01219368	BS EXER	CEXP
201010	@01149356	BS EXER	CEXP
201010	@01108876	BS EXER	CEXP
201010	@01178529	BS EXER	CEXP

201010	@01143349	BS EXER	CEXP
201010	@01177219	BS EXER	CEXP
201010	@01137235	BS EXER	CEXP
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201010	@01214164	BS EXER	CEXP
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201010	@01137768	BS EXER	CEXP
201010	@01093807	BS EXER	CEXP
201010	@01179645	BS EXER	CEXP
201010	@01192613	BS EXER	CEXP
201010	@01174715	BS EXER	CEXP
201010	@01178616	BS EXER	CEXP
201010	@01195272	BS EXER	CEXP
201010	@01188623	BS EXER	CEXP
201010	@01171266	BS EXER	CEXP
201010	@01197912	BS EXER	CEXP
201010	@01193136	BS EXER	CEXP
201010	@00206421	BS EXER	CEXP
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201010	@01181747	BS EXER	CEXP
201010	@01195488	BS EXER	CEXP
201010	@01126622	BS EXER	CEXP
201010	@01172014	BS EXER	CEXP
201010	@01190556	BS EXER	CEXP
201010	@01192758	BS EXER	CEXP
201010	@01194572	BS EXER	CEXP
201010	@01140417	BS EXER	CEXP
201010	@01125109	BS EXER	CEXP
201010	@01215647	BS EXER	CEXP
201010	@01210286	BS EXER	CEXP
201010	@01210860	BS EXER	CEXP
201010	@01215401	BS EXER	CEXP
201010	@01120259	BS EXER	CEXP
201010	@01134837	BS EXER	CEXP
201010	@01134838	BS EXER	CEXP
201010	@01141705	BS EXER	CEXP
201010	@01143650	BS EXER	CEXP
201010	@01110003	BS EXER	CEXP
201010	@01099515	BS EXER	CEXP
201010	@01101811	BS EXER	CEXP
201010	@01133440	BS EXER	CEXP

201010	@01134898	BS EXER	CEXP
201010	@01137670	BS EXER	CEXP
201010	@01135605	BS EXER	CEXP
201010	@01170529	BS EXER	CEXP
201010	@01141400	BS EXER	CEXP
201010	@01181791	BS EXER	CEXP
201010	@01207633	BS EXER	CEXP
201010	@01147217	BS EXER	CEXP
201010	@01172979	BS EXER	CEXP
201010	@01191838	BS EXER	CEXP
201010	@01206893	BS EXER	CEXP
201010	@01173425	BS EXER	CEXP
201010	@01205805	BS EXER	CEXP
201010	@01210836	BS EXER	CEXP
201010	@01182589	BS EXER	CEXP
201010	@01182620	BS EXER	CEXP
201010	@01209968	BS EXER	CEXP
201010	@01213243	BS EXER	CEXP
201010	@01133353	BS EXER	CEXP
201010	@01126729	BS EXER	CEXP
201010	@01053239	BS EXER	CEXP
201010	@01109374	BS EXER	CEXP
201010	@01190180	BS EXER	CEXP
201010	@01210935	BS EXER	CEXP
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201010	@01051153	BS EXER	CEXP
201010	@01182702	BS EXER	CEXP
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201010	@01176662	BS EXER	CEXP
201010	@01194037	BS EXER	CEXP
201010	@01182786	BS EXER	CEXP
201010	@01195924	BS EXER	CEXP
201010	@01182863	BS EXER	CEXP
201010	@01124938	BS EXER	CEXP
201010	@01191165	BS EXER	FITX
201010	@01212364	BS EXER	FITX
201010	@01197519	BS EXER	FITX
201010	@01209938	BS EXER	FITX
201010	@01152027	BS EXER	FITX
201010	@01211227	BS EXER	FITX
201010	@01126755	BS EXER	FITX
201010	@01210917	BS EXER	FITX
201010	@01209841	BS EXER	FITX
201010	@01177519	BS EXER	FITX
201010	@01209253	BS EXER	FITX
201010	@01211153	BS EXER	FITX

201010	@00123017	BS	EXER	FITX
201010	@01195554	BS	EXER	FITX
201010	@01213271	BS	EXER	FITX
201010	@01128322	BS	EXER	FITX
201010	@01139574	BS	EXER	FITX
201010	@01185301	BS	EXER	FITX
201010	@01137946	BS	EXER	FITX
201010	@01154068	BS	EXER	FITX
201010	@01156716	BS	EXER	FITX
201010	@01181365	BS	EXER	FITX
201010	@01071102	BS	EXER	FITX
201010	@01193629	BS	EXER	FITX
201010	@01176584	BS	EXER	FITX
201010	@01180435	BS	EXER	FITX
201010	@01194618	BS	EXER	FITX
201010	@01202951	BS	EXER	FITX
201010	@01216071	BS	EXER	FITX
201010	@01189504	BS	EXER	FITX
201010	@01210370	BS	EXER	FITX
201010	@01211341	BS	EXER	FITX
201010	@01211293	BS	EXER	FITX
201010	@01208528	BS	EXER	FITX
201010	@01218281	BS	EXER	FITX
201010	@01193744	BS	EXER	FITX
201010	@01193198	BS	EXER	FITX
201010	@01219340	BS	EXER	FITX
201010	@01172500	BS	EXER	FITX
201010	@01163271	BS	EXER	FITX
201010	@01124754	BS	EXER	FITX
201010	@01161099	BS	EXER	FITX
201010	@01187358	BS	EXER	FITX

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201110
Fall 2010
BS
EXER

201110	@01226056	BS	EXER	
201110	@01227976	BS	EXER	
201110	@01233574	BS	EXER	
201110	@01222358	BS	EXER	
201110	@01196475	BS	EXER	
201110	@01161098	BS	EXER	
201110	@01215489	BS	EXER	
201110	@01228301	BS	EXER	
201110	@01145054	BS	EXER	
201110	@01212867	BS	EXER	
201110	@01209633	BS	EXER	

201110	@01175196	BS EXER	CEXP
201110	@01190492	BS EXER	CEXP
201110	@01175777	BS EXER	CEXP
201110	@01109374	BS EXER	CEXP
201110	@01174715	BS EXER	CEXP
201110	@01114600	BS EXER	CEXP
201110	@01133353	BS EXER	CEXP
201110	@01134837	BS EXER	CEXP
201110	@01134838	BS EXER	CEXP
201110	@01235289	BS EXER	CEXP
201110	@01211793	BS EXER	CEXP
201110	@01219057	BS EXER	CEXP
201110	@01226497	BS EXER	CEXP
201110	@01109445	BS EXER	CEXP
201110	@01215765	BS EXER	CEXP
201110	@01182589	BS EXER	CEXP
201110	@01182620	BS EXER	CEXP
201110	@01116527	BS EXER	CEXP
201110	@01211710	BS EXER	CEXP
201110	@01210935	BS EXER	CEXP
201110	@01213243	BS EXER	CEXP
201110	@01177184	BS EXER	CEXP
201110	@01139349	BS EXER	CEXP
201110	@01175193	BS EXER	CEXP
201110	@01159745	BS EXER	CEXP
201110	@01157111	BS EXER	CEXP
201110	@01127006	BS EXER	CEXP
201110	@01188338	BS EXER	CEXP
201110	@01204893	BS EXER	CEXP
201110	@01237652	BS EXER	CEXP
201110	@01143650	BS EXER	CEXP
201110	@01140417	BS EXER	CEXP
201110	@01132531	BS EXER	CEXP
201110	@01179645	BS EXER	CEXP
201110	@01176170	BS EXER	CEXP
201110	@01143349	BS EXER	CEXP
201110	@01030040	BS EXER	CEXP
201110	@01147217	BS EXER	CEXP
201110	@01228407	BS EXER	CEXP
201110	@01186373	BS EXER	CEXP
201110	@01182669	BS EXER	CEXP
201110	@01219368	BS EXER	CEXP
201110	@01222303	BS EXER	CEXP
201110	@01224301	BS EXER	CEXP
201110	@01191795	BS EXER	CEXP
201110	@01236165	BS EXER	CEXP
201110	@01127388	BS EXER	CEXP

201110	@01192188	BS EXER	CEXP
201110	@01214605	BS EXER	CEXP
201110	@01186134	BS EXER	CEXP
201110	@01195272	BS EXER	CEXP
201110	@01189504	BS EXER	CEXP
201110	@01183339	BS EXER	CEXP
201110	@01234505	BS EXER	CEXP
201110	@01189206	BS EXER	CEXP
201110	@01190279	BS EXER	CEXP
201110	@01091887	BS EXER	CEXP
201110	@01194572	BS EXER	CEXP
201110	@01176172	BS EXER	CEXP
201110	@01195628	BS EXER	CEXP
201110	@01177956	BS EXER	CEXP
201110	@01125109	BS EXER	CEXP
201110	@01182863	BS EXER	CEXP
201110	@01228420	BS EXER	CEXP
201110	@01171264	BS EXER	CEXP
201110	@01191838	BS EXER	CEXP
201110	@01223350	BS EXER	CEXP
201110	@01224425	BS EXER	CEXP
201110	@01230182	BS EXER	CEXP
201110	@01225501	BS EXER	CEXP
201110	@01227151	BS EXER	CEXP
201110	@01230488	BS EXER	CEXP
201110	@01205696	BS EXER	CEXP
201110	@01213912	BS EXER	CEXP
201110	@01126622	BS EXER	CEXP
201110	@01172014	BS EXER	CEXP
201110	@01223729	BS EXER	CEXP
201110	@01217090	BS EXER	CEXP
201110	@01229901	BS EXER	CEXP
201110	@01222957	BS EXER	CEXP
201110	@01231524	BS EXER	CEXP
201110	@01191551	BS EXER	CEXP
201110	@01228283	BS EXER	CEXP
201110	@01218029	BS EXER	CEXP
201110	@01205694	BS EXER	CEXP
201110	@01195154	BS EXER	CEXP
201110	@01130890	BS EXER	CEXP
201110	@01182521	BS EXER	CEXP
201110	@01224635	BS EXER	CEXP
201110	@01187358	BS EXER	CEXP
201110	@01216708	BS EXER	CEXP
201110	@01189351	BS EXER	CEXP
201110	@01228455	BS EXER	CEXP
201110	@01210286	BS EXER	CEXP

201110	@01206893	BS EXER	CEXP
201110	@01195924	BS EXER	CEXP
201110	@01137235	BS EXER	CEXP
201110	@01229378	BS EXER	CEXP
201110	@01212155	BS EXER	CEXP
201110	@01206379	BS EXER	CEXP
201110	@01210860	BS EXER	CEXP
201110	@01173425	BS EXER	CEXP
201110	@01189836	BS EXER	CEXP
201110	@01133396	BS EXER	CEXP
201110	@01149228	BS EXER	CEXP
201110	@01208089	BS EXER	CEXP
201110	@01226925	BS EXER	CEXP
201110	@01130821	BS EXER	CEXP
201110	@01186405	BS EXER	CEXP
201110	@01229182	BS EXER	CEXP
201110	@01210130	BS EXER	CEXP
201110	@01236816	BS EXER	CEXP
201110	@01231942	BS EXER	CEXP
201110	@01181691	BS EXER	CEXP
201110	@01210836	BS EXER	CEXP
201110	@01063975	BS EXER	CEXP
201110	@01177219	BS EXER	CEXP
201110	@01200161	BS EXER	CEXP
201110	@01218316	BS EXER	CEXP
201110	@01172979	BS EXER	CEXP
201110	@01209887	BS EXER	CEXP
201110	@01184986	BS EXER	CEXP
201110	@01207669	BS EXER	CEXP
201110	@01192920	BS EXER	CEXP
201110	@01161100	BS EXER	CEXP
201110	@01197604	BS EXER	CEXP
201110	@01181747	BS EXER	CEXP
201110	@01203567	BS EXER	CEXP
201110	@01235024	BS EXER	CEXP
201110	@01124938	BS EXER	CEXP
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201110	@01207746	BS EXER	CEXP
201110	@01207009	BS EXER	CEXP
201110	@01211153	BS EXER	CEXP
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201110	@01215401	BS EXER	CEXP
201110	@01227507	BS EXER	CEXP
201110	@01186489	BS EXER	CEXP
201110	@01196594	BS EXER	CEXP
201110	@01218281	BS EXER	CEXP

201110	@01176662	BS EXER	CEXP
201110	@01149356	BS EXER	CEXP
201110	@01211350	BS EXER	CEXP
201110	@01205249	BS EXER	CEXP
201110	@01207633	BS EXER	CEXP
201110	@01108678	BS EXER	CEXP
201110	@01193140	BS EXER	CEXP
201110	@01190180	BS EXER	CEXP
201110	@01218669	BS EXER	CEXP
201110	@01210144	BS EXER	CEXP
201110	@01211682	BS EXER	CEXP
201110	@01227114	BS EXER	CEXP
201110	@01217950	BS EXER	CEXP
201110	@01139574	BS EXER	FITX
201110	@01071102	BS EXER	FITX
201110	@01181088	BS EXER	FITX
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201110	@01193629	BS EXER	FITX
201110	@01126755	BS EXER	FITX
201110	@01185031	BS EXER	FITX
201110	@01231743	BS EXER	FITX
201110	@01200922	BS EXER	FITX
201110	@01229306	BS EXER	FITX
201110	@00123017	BS EXER	FITX
201110	@01125107	BS EXER	FITX
201110	@01161099	BS EXER	FITX
201110	@01229762	BS EXER	FITX
201110	@01124754	BS EXER	FITX
201110	@01231772	BS EXER	FITX
201110	@01213271	BS EXER	FITX
201110	@01137946	BS EXER	FITX
201110	@01177519	BS EXER	FITX
201110	@01195554	BS EXER	FITX
201110	@01185301	BS EXER	FITX
201110	@01193744	BS EXER	FITX
201110	@01141899	BS EXER	FITX
201110	@01189578	BS EXER	FITX
201110	@01176584	BS EXER	FITX
201110	@01210917	BS EXER	FITX
201110	@01128322	BS EXER	FITX
201110	@01209841	BS EXER	FITX
201110	@01196981	BS EXER	FITX
201110	@01212749	BS EXER	FITX
201110	@01193198	BS EXER	FITX
201110	@01225692	BS EXER	FITX
201110	@01232935	BS EXER	FITX
201110	@01181365	BS EXER	FITX

201110	@01180435	BS	EXER	FITX
201110	@01202951	BS	EXER	FITX
201110	@01211293	BS	EXER	FITX
201110	@01210426	BS	EXER	FITX
201110	@01212209	BS	EXER	FITX

Fall semester end-of-term enrollment

Fall semester end-of-term enrollment					
			Fall 2010		
BS	EXER		15		
		1 White	168		
		2 Black or African American	7		
		4A Asian	5		
		5 American Indian or Alaskan Native	1		
		6 Cape Verdean	1		
		9 More than one	7		
		Total	204		
	Total		204		

Fall semester end-of-term enrollment

Fall semester end-of-term enrollment												
				Fall 2006		Fall 2007		Fall 2008		Fall 2009		
BS	EXER	F		1		0		0		0		
			African Amer/Black DO NOT USE	1		1		1		3		
			Asian DO NOT USE	2		1		1		1		
			Hispanic DO NOT USE	2		2		2		2		
			Other DO NOT USE	0		0		1		1		
			Unknown DO NOT USE	2		4		2		6		
			White, Non-Hispanic DO NOT USE	50		67		86		92		
			Total	58		75		93		105		
		M		1		1		1		1		
			African Amer/Black DO NOT USE	2		3		6		4		
			Asian DO NOT USE	0		2		3		4		
			Hispanic DO NOT USE	1		0		0		3		
			Other DO NOT USE	0		1		1		2		
			Unknown DO NOT USE	4		6		5		4		
			White, Non-Hispanic DO NOT USE	51		61		56		68		
			Total	59		74		72		86		
		Total			117		149		165		191	

Applications, Acceptances, and New Enrollment in EXER Major

Fall 2006		
	Freshmen	Transfers
Applied	134	18
Accepted	100	15
Enrolled	32	9

Fall 2007		
	Freshmen	Transfers
Applied	134	19
Accepted	86	15
Enrolled	26	13

Fall 2008		
	Freshmen	Transfers
Applied	136	27
Accepted	74	23
Enrolled	25	14

Fall 2009		
	Freshmen	Transfers
Applied	159	37
Accepted	101	30
Enrolled	35	26

Fall 2010		
	Freshmen	Transfers
Applied	158	29
Accepted	104	26
Enrolled	36	19

Fitchburg State University

University-wide 6 Year Graduation Rates (First-time full-time freshman)

6 Year Graduation Rate (any major)

<i>Entering Class</i>	<i># Entered</i>	<i>Ave. HSGPA</i>	<i>Ave. SAT</i>	<i>% Graduated</i>
2004	713	2.89	1017	52%
2003	586	2.92	1026	52%
2002	497	2.93	997	51%
2001	405	2.92	1015	47%
2000	448	2.90	1008	52%
1999	344	2.84	983	55%
1998	503	2.71	968	47%

Major in Exercise Science 6 Year Graduation Rates (First-time full-time freshman)

6 Year Graduation Rate (any major)

<i>Entering Class</i>	<i># Entered</i>	<i>Ave. HSGPA</i>	<i>Ave. SAT</i>	<i>% Graduated</i>
2004	12	2.94	958	50%
2003	17	2.88	996	41%
2002	7	3.01	933	57%
2001	-			
2000	-			
1999	-			
1998	-			

Fall 2004 First-time Full-time Freshmen

6 Year Completion Rate by Initial Major

Initial Major (10/15/04)	# Entered	# Graduated in any Major	% Graduated in any Major	# Entered Who Graduated in Initial Major	% Entered Who Graduated in Initial Major
Exercise & Sport Science	12	6	50%	4	25%
Fall 2004 FTFTF Total (no Pre-major)	613	329	54%	232	38%*

*38% of the entering cohort graduated within six years in their initial major (excluding pre-majors)

Fall 2003 First-time Full-time Freshmen

6 Year Completion Rate by Initial Major

Initial Major (10/15/03)	# Entered	# Graduated in any Major	% Graduated in any Major	# Entered Who Graduated in Initial Major	% Entered Who Graduated in Initial Major
Exercise & Sport Science	17	7	41%	3	18%
Fall 2003 FTFTF Total (no Pre-major)	490	261	53%	187	38%*

*38% of the entering cohort graduated within six years in their initial major (excluding pre-majors)

Fall 2002 First-time Full-time Freshmen

6 Year Completion Rate by Initial Major

Initial Major (10/15/02)	# Entered	# Graduated in any Major	% Graduated in any Major	# Entered Who Graduated in Initial Major	% Entered Who Graduated in Initial Major
Exercise & Sport Science	7	4	57%	4	57%
Fall 2002 FTFTF Total (no Pre-major)	427	223	52%	146	34%*

*34% of the entering cohort graduated within six years in their initial major (excluding pre-majors)