BETHLEHEM AREA VOCATIONAL-TECHNICAL SCHOOL
3300 CHESTER AVENUE
BETHLEHEM PA 18020

Intro to Sports Medicine Careers
Mrs. Moreen Wheatley
610-866-8013 ext. 115 wheatleym@bavts.org

Intro to Sports Medicine Careers

Course Description:

In this program our students will be educated on the theories of injury prevention & recognition, emergency care, creating exercise & rehabilitation programs along with overall mental and physical health and wellness. They will learn medical terminology, safety procedures, nutritional facts, basic anatomy, and kinesiology. Our students will also become certified in First Aid, CPR, AED, and Blood Borne Pathogens.

Directly out of high school, our students will be qualified to become Personal Trainers, Licensed Athletic Coaches, Fitness Instructors, and Nutrition and Wellness Consultants. The earning of the entry level certifications in our program will allow our students the opportunity to advance forward to the next level of education easier than the average high school student. If our students desire to pursue their education further they will be opening themselves up to careers in Athletic Training, Physical Therapy, Kinesiology and Exercise Science/Physiology.

There are so many different paths that our students can take after being part of our program, from working in settings such as physical therapy clinics, fitness gyms, hospitals or even working with specific sports teams. The road to success in the sports medicine field starts with us, Bethlehem Area Vocational-Technical School's Intro to Sports Medicine Careers Program.

Average pay:

Athletic Trainers Masters: $69,000

Doctors of Physical Therapy: $88,000

Certified Strength and Conditioning Specialists: $91,000

High School Graduates: Personal Training Certification through ACE Fitness

Two-Year Degree: Physical Therapist Assistant - Associate's Degree

Four-Year Degree: Certified Strength and Conditioning Specialist

Graduate Degree: Master of Athletic Trainer & Doctor of Physical Therapy

Reference Material:

Sports Medicine Essentials: Core concepts in Athletic Training and Fitness Instruction - Jim Clover
Principles of Athletic Training - Prentice

Classroom Tools:

Windows Tablets
Text & Work books

Clinic Tools:

Exercise equipment
Clinic supplies

Course Syllabus Level 1

First Semester (First Marking Period)

1000: Anatomy, Physiology & Pathophysiology:

Projects:

Rotation:
Basic bone identification
Display skills of basic ankle wrap and crutch
Beginning to Musculoskeletal System

Duty and Tasks Covered:

1000 Anatomy, Physiology & Pathophysiology:

1001 Identify the basic structure of the human body
1004 Identify organs, functions and disease processes of the skeletal system (NATA 6.2/6.6)
Partial 403 - Determine the appropriate and **demonstrate basic athletic taping and wrapping techniques** for client's needs (NATA 7.5/7.6/7.7)

First Semester (Second Marking Period)

Anatomy, Physiology & Pathophysiology:

Projects:

Body planes, direction & cavity quiz
Skull assembled
Functional skeletal muscle
Integumentary Quiz - option of project instead
Nervous System Quiz
Neurological disorders presentations
Cardiovascular fitness challenge
Cardiovascular System Project
Respiratory Quiz
1 Midterm

Duty and Tasks Covered:

1000: Anatomy, Physiology & Pathophysiology:

1001 Identify the basic structure of the human body
1002 Identify anatomical position, body planes, directions and cavities (NATA 15.2)
1003 Identify organs, functions and disease processes of the integumentary system (NATA 6.1)
1004 Identify organs, functions and disease processes of the skeletal system (NATA 6.2/6.6)
1005 Identify organs, functions and disease processes of the muscular system (NATA 6.2/6.6)
1006 Identify organs, functions and disease processes of the nervous system (NATA 6.3/9.1)
1007 Identify organs, functions and disease processes of the cardiovascular system (NATA 6.4)
1010 Identify organs, functions and disease processes of the respiratory system (NATA 6.8)

Second Semester (Third Marking Period)

Anatomy, Physiology & Pathophysiology:

Projects:

Endocrine Quiz
Lymphatic System Quiz
Lymphatic System Project
Urinary/Excretory Project
Digestive System Project
Reproductive System Research & Project

Duty and Tasks Covered:

1000: Anatomy, Physiology & Pathophysiology:

1008 Identify organs, functions and disease processes of the endocrine system (NATA 6.5)
1009 Identify organs, functions and disease processes of the lymphatic system (NATA 6.7)
1011 Identify organs, functions and disease processes of the urinary/excretory system (NATA 6.9/6.10)
1012 Identify organs, functions and disease processes of the digestive/excretory system (NATA 6/10/6.12)
1013 Identify organs, functions and disease processes of the reproductive system (NATA 6.11)

Second Semester (Fourth Marking Period)

Sports Medicine I:

Projects:

Immune System Presentations
Daily food journal logs
Self-experimental food challenges
Diet Presentation
Food label break down day

Duty and Tasks Covered:

1000: Anatomy, Physiology & Pathophysiology:

1014 Identify organs, functions and disease processes of the immune system (NATA 6.13/9.1)

600: Nutrition & Hydration

601 Demonstrate understanding of daily nutritional requirements and caloric intake needs/BMR
602 Demonstrate ability to read and understand food labels

Level 1 Outcomes: Anatomy and Physiology Final. Student should all have in depth understanding of the human anatomy and basic understanding of nutrition.

Course Syllabus Level 2:

First Semester (First Marking Period)

Sports Medicine II:

Projects:

EAP Project Launch
Career Research Presentations
EAP Project Work
- EAP Coversheet
- RACE/PASS
- Institution Rules/Guidelines
- Emergency Contacts
- Rosters
- Complex Layouts
- Complex Evacuations

Interpersonal conflict scenarios
Budget Midterm Launch
Anatomy and Physiology Friday Reviews

Duty and Tasks Covered:

100: Organizational and Professional Health & Wellbeing:

101 Identify school and health care/fitness facility partner rules, regulations and attendance requirements
102 Recognize school layout, resources and evacuation procedures
103 Follow safety and emergency procedures of the facility (RACE/PASS) and report emergencies immediately
104 Identify course objectives, expectations and grading procedures
105 Outline standards for health care professionals by identifying professionalism (behavior, appearance, communication, etc.)
106 Recognize opportunity to demonstrate membership/leadership/citizenship skills through participation in a career and technical student organization
107 Differentiate between fitness and health care careers by: describing historical foundations, comparing and contrasting roles/responsibilities, describing educational/licensure requirements and analyzing different occupational opportunities of various sports medicine careers (NATA 1.1/1.2/1.3/1.4/1.5/4.1/13.2)
108 Demonstrate understanding of proper use of medical/fitness equipment and report on non-functioning equipment immediately
109 Demonstrate understanding and use of proper body mechanics for personal and client safety (NATA 9.7)

110 Identify the "chain of command" in the organizational structure of the health care agency and scope of practice
111 Identify effective interpersonal conflict management skills
112 Describe basic healthcare facility design for a safe and efficient clinical practice setting.

900: Medical Terminology

901 Identify combining forms
902 Identify abbreviations
903 Identify, demonstrate and interpret proper use of medical terminology

2000: Mathematics Applied to HealthCare and Wellness Professions

2001 Utilize mathematics applications in healthcare
2002 Identify systems of measurements used within health care and wellness professions
2003 Identify and convert between measurement systems including metric system (i.e.: lbs. to kg and in to cm, etc.)

First Semester (Second Marking Period)

Sports Medicine II:

Projects:

EAP Work
- Informed Consents
- Emergency Insurance
- Pre-participation Physical Evaluations
- Special Instructions Cards

NATA Code of Ethical Scenarios
Media Coverage Patient Privacy Scenarios
Ch. 2 Clovers Exam
Anatomy and Physiology Friday Reviews
Midterm Projects

Duty and Tasks Covered:

200 Documentation, Legal & Ethical Considerations:

200 Documentation, Legal & Ethical Considerations:
201 Explain the differences and maintain the confidentiality of records/information as required by HIPAA/FERPA (NATA 2.5)
202 Explain the components of Informed Consent and how to implement
203 Explain the legal importance of accurate, clear and up to date record keeping to the benefit of all parties (NATA 2.3/3.6)
204 Describe legal concepts of liability, negligence, supervision and assumption of risk (NATA 3.3/4.1)
205 Demonstrate knowledge of electronic medical records (EMR)

206 Identify and analyze legal considerations via scenarios that differentiate between legal and ethical actions (NATA 2.4/3.2/3.4)
207 Demonstrate understanding of how to protect a patient/client's privacy while assisting or caring for them

900: Medical Terminology

901 Identify combining forms
902 Identify abbreviations
903 Identify, demonstrate and interpret proper use of medical terminology

2000: Mathematics Applied to HealthCare and Wellness Professions

2001 Utilize mathematics applications in healthcare
2002 Identify systems of measurements used within health care and wellness professions
2003 Identify and convert between measurement systems including metric system (i.e.: lbs. to kg and in to cm, etc.)

Second Semester (Third Marking Period)

Sports Medicine II:

Projects:

Daily food journal logs
Self-experimental food challenges
Diet Presentation
Food label break down day
Nutrition Quiz
Athletes Nutrition/Hydration Plan
Nutrition plan for given scenario patient (weight gain or loss)
Medication Research Project
Anatomy and Physiology Friday Reviews

Duty and Tasks Covered:

600: Nutrition & Hydration

603 List general principles of basic and sport nutrition and hydration including the six classes of nutrients (NATA 8.1)
604 Identify signs and symptoms of dehydration and describe the appropriate methods for maintaining hydration during exercise
605 Explain the importance of proper nutrition in enhancing performance, healing from injury and injury prevention (NATA 8.2)
606 Differentiate and identify methods to assess body weight and composition and issues associated with each method (NATA 8.3/8.4)
607 Identify safe methods for weight loss and weight gain (NATA 8.5)
608 Identify and plan basic diets
609 Describe the difference between OTC and prescription medications (NATA 14.1)

610 Identify socially used drugs, ergogenic aids and problems associated with general health and athletic performance (NATA 14.4)

900: Medical Terminology

901 Identify combining forms
902 Identify abbreviations
903 Identify, demonstrate and interpret proper use of medical terminology

2000: Mathematics Applied to HealthCare and Wellness Professions

2001 Utilize mathematics applications in healthcare
2002 Identify systems of measurements used within health care and wellness professions
2003 Identify and convert between measurement systems including metric system (i.e.: lbs. to kg and in to cm, etc.)

Second Semester (Fourth Marking Period)

Evidence Based Practice

Projects:

Reading - Writing Assignments
Citations
Demonstrating ability to use search engines
Anatomy and Physiology Friday Reviews
Final

Duty and Tasks Covered:

3000: Evidence Based Practice:

3001 Define evidence-based practice
3002 Explain the role of evidence in clinical decision making process
3003 Conduct a literature search using a clinical question relevant to sports medicine practice using search techniques (e.g., Boolean search, Medical Subject Headings) and resources appropriate for a specific clinical question

900: Medical Terminology

901 Identify combining forms
902 Identify abbreviations
903 Identify, demonstrate and interpret proper use of medical terminology

2000: Mathematics Applied to HealthCare and Wellness Professions

2001 Utilize mathematics applications in healthcare
2002 Identify systems of measurements used within health care and wellness professions

2003 Identify and convert between measurement systems including metric system (i.e.: lbs. to kg and in to cm, etc.)

Level 2 Outcome: Students will have basic and advanced understanding of Organizational and professional health & wellbeing, documentation, legal & ethical considerations, nutrition & hydration, medical terminology, medical math and evidence based practices.

Course Syllabus Level 3

First Semester (First Marking Period)

Sports Medicine III:

Projects:

Midterm Injury Research Launch
Injury Presentation
Class constructed bracing and splinting PowerPoint
Manual Muscle Testing & ROM Video Submissions
Soaps/ Hops Scenarios
Practical Exam for Emergency Situations
Demonstrate ability to take accurate client history

Duty and Tasks Covered:

300: Emergency Care and Infection Control

302 Demonstrate knowledge of signs and symptoms, prevention and treatment of weather-related illnesses (NATA 5.1/5.2/5.3/5.5/5.6/11.3)
303 Demonstrate knowledge of Basic Life Support with CPR, AED and Basic First Aid (NATA 11.3/11.5)
304 Demonstrate knowledge of signs and symptoms, prevention and treatment of head injuries/MTBI's (NATA 11.3/11.4)
305 Demonstrate knowledge of signs and symptoms, prevention and treatment of acute traumatic cervical spine injuries (NATA 11.3)
306 Recognize common causes of cardiorespiratory complications in athletes and clients (NATA 11.3/11.6)
307 Demonstrate knowledge of emergency management techniques for shock, allergic reaction, asthma, and seizure (NATA 11.3)

400: Injury Prevention and Protection

401 Demonstrate awareness of types of marketed and fabricated bracing/splinting devices and techniques (NATA 7.3)

500: Treatment, Rehabilitation and Clinical Skills

501 Demonstrate ability to take an accurate client history
502 Differentiate between HOPS (history/observation/palpation/special tests) and SOAP (subjective/objective/assessment/plan) (NATA 15.1)
503 Measure and record height and weight
504 Measure and record vital signs (VS) temperature, pulse, blood pressure, respirations, pain
506 Identify normal values for and measure ROM with goniometer (NATA 15.3)

900: Medical Terminology

901 Identify combining forms
902 Identify abbreviations
903 Identify, demonstrate and interpret proper use of medical terminology

2000: Mathematics Applied to HealthCare and Wellness Professions

2001 Utilize mathematics applications in healthcare
2002 Identify systems of measurements used within health care and wellness professions
2003 Identify and convert between measurement systems including metric system (i.e.: lbs. to kg and in to cm, etc.)

First Semester (Second Marking Period)

Sports Medicine III:

Projects:

Emergency Management Treatments
Wound Care Slides
PRICE Procedures
Disease Displays/Presentations
Hand washing practical
Blood borne Pathogens Certification
Written Exposure Plans
Taping Practical
Midterm

Duty and Tasks Covered:

300: Emergency Care and Infection Control

308 Demonstrate knowledge of emergency management techniques for contusions, wounds, hemorrhaging, sprains, strains, dislocations and fractures (NATA 11.3)
309 Demonstrate how to apply PRICE principle
310 Identify diseases and their mode of transmission
311 Perform basic cleaning and disinfection of objects and surfaces to prevent disease transmission
312 Demonstrate proper hand washing technique

313 Investigate various blood borne pathogens (NATA 10.2)
314 Explain OSHA blood borne pathogen standard (NATA 10.3)
315 Outline the components of a written exposure plan (NATA 10.4)
316 Identify need for and proper use of PPE
317 Explain basic wound care procedures and apply a dressing (NATA 10.5)
318 Locate and discuss the significance of SDS/MSDS

400: Injury Prevention and Protection

402 Debate the advantages and disadvantages of taping versus bracing (NATA 7.4)
403 Determine the appropriate and demonstrate basic athletic taping and wrapping techniques for client's needs (NATA 7.5/7.6/7.7)
404 Identify safety measures that prevent accidents to clients including the proper use of equipment (bed rails and locks, wheelchair locks, gait belts, etc.)
405 Demonstrate knowledge of modifications strategies for client's with special needs or special populations of clients

900: Medical Terminology

901 Identify combining forms
902 Identify abbreviations
903 Identify, demonstrate and interpret proper use of medical terminology

2000: Mathematics Applied to HealthCare and Wellness Professions

2001 Utilize mathematics applications in healthcare
2002 Identify systems of measurements used within health care and wellness professions
2003 Identify and convert between measurement systems including metric system (i.e.: lbs. to kg and in to cm, etc.)

Second Semester (Third Marking Period)

Sports Medicine III:

Projects:

Manual Muscle and ROM Practical Testing
Phases of Rehab set into motions through Final
Upper and Lower Body injury prevention and treatment exam
Pre-participation Exam
Complete Baseline testing of self and partner
Exercise Science Exam
Practical Exam for proper mechanics
Presentations of Specific Athletes Body Mechanics

Duty and Tasks Covered:

500: Treatment, Rehabilitation and Clinical Skills

507 Demonstrate basic UE and LE MMT (NATA 15.3)
508 Differentiate and perform active, active assistive, passive and resistive range of motion exercises (NATA 15.3)
509 Understand the phases of rehabilitation (NATA 13.3)
510 Demonstrate knowledge of signs and symptoms, prevention and treatment of lower extremity injuries
511 Demonstrate knowledge of signs and symptoms, prevention and treatment of upper extremity injuries
512 List the types of modalities and safety procedures with each (NATA 13.1)
513 Apply basic cryo/thermotherapy modalities
514 Assist the client with ambulatory and transfer devices (e.g. cane, quad cane, walker, crutches, wheelchair, etc.) utilizing proper safety devices (gait belt, transfer board, transfer disc, etc.)

700: Exercise Science and Prescription

701 Explain the role of pre-exercise screening in determining physical activity participation
702 Demonstrate ability to utilize health/fitness intake questionnaire
703 Identify and conduct baseline testing for body composition, cardiorespiratory, strength, muscular endurance and flexibility
704 Demonstrate an understanding of the FITTE (frequency, intensity, time, type, enjoyment) components of exercise prescription and modification (NATA 4.4/4.5)
705 Select appropriate exercises to improve cardiorespiratory fitness, muscular strength, muscular endurance and flexibility for a client (NATA 4.6)
706 Select appropriate exercises to improve agility, function, power, speed, balance and proprioception for a client
707 Demonstrate understanding of short term, long term and SMART (specific, measurable, attainable, realistic and time bound) goals
708 Identify correct spotting techniques for resistance training exercise

900: Medical Terminology

901 Identify combining forms
902 Identify abbreviations
903 Identify, demonstrate and interpret proper use of medical terminology

2000: Mathematics Applied to HealthCare and Wellness Professions

2001 Utilize mathematics applications in healthcare
2002 Identify systems of measurements used within health care and wellness professions
2003 Identify and convert between measurement systems including metric system (i.e.: lbs. to kg and in to cm, etc.)

Second Semester (Fourth Marking Period)

Sports Medicine III:

Projects:

Mental Health Toolbox (PBL - MP long assignment)

Final - Continuation from Midterm

Duty and Tasks Covered:

800: Human Development and Mental Health:

801 Demonstrate knowledge of human growth and development through the lifespan
802 Identify types of diversity (age/culture, etc.) and communicate in a respectful, mature manner according to the client's stage of development and background
803 Explain how culture and religion influence a person's attitude toward aspects of care (NATA 15.4)
804 Recognize how age, illness and disability affect psychosocial and physical changes in the client (NATA 12.1/12.2)
805 Identify and discuss various types of mental health disorders
806 Identify and discuss various types of disordered eating
807 Recognize physical and psychological indicators of stress in self and others and identify stress reduction techniques
808 Discuss feelings and attitudes about loss and grief

900: Medical Terminology

901 Identify combining forms
902 Identify abbreviations
903 Identify, demonstrate and interpret proper use of medical terminology

2000: Mathematics Applied to HealthCare and Wellness Professions

2001 Utilize mathematics applications in healthcare
2002 Identify systems of measurements used within health care and wellness professions
2003 Identify and convert between measurement systems including metric system (i.e.: lbs. to kg and in to cm, etc.)

Level 3 Outcomes: Students will have basic and advanced understanding of injury prevention & protection, treatment, rehabilitation & clinical skills, exercise science & prescription, human development & mental health, medical terminology, and medical math.

Supplemental Learning Activities

Students who participate in this program will also have opportunities to participate in the following programs and school-sponsored activities:

SkillsUSA: Students are available to compete in SkillsUSA competitions and potentially earn scholarship money.

HOSA: Students are available to compete in SkillsUSA competitions and potentially earn scholarship money.

NTHS: Level II and Level III students who have received an "A" in their career and technical program as well as a "B" average at their sending school are eligible to become a member of the BAVTS Chapter of the National Technical Honor Society.

Cooperative Education: Students who have attended six quarters in their career and technical programs are eligible to participate in a paid working experience during the PM session of BAVTS. Positions must be available and the students must be recommended by the CTE teacher to be eligible.

Job Shadowing: Students are eligible to visit business and industry partners for one or more days to view the day-to-day operations of this career area.

Internships: Students who have completed six or more quarters of their CTE program are eligible to work for a business and industry partner with the recommendation of the instructor and the availability of assignment.

Field Trips: Students in this program will on occasion attend field trips that expose them to educational experiences within the career field.

College Credit: Intro to Sports Medicine Careers students are eligible for advanced credit through an Articulation Agreement with East Stroudsburg University and pending other Institutions.