

Sports Performance

District Name: Abbotsford

District Number: #34

Developed by: Gurdish Grewal

Date Developed: 2009

School Name: Rick Hansen Secondary

Principal's Name: Mr. Jinder Sarowa

Board/Authority Approval Date: May 14, 2009

Board/Authority Signature:

Course Name: Sports Performance 11

Grade Level of Course: 11

Number of Course Credits: 4

Number of Hours of Instruction: 120 hours

Prerequisite(s): PE 10 or PE 9

Special Training, Facilities or Equipment Required:

Special Training: Physical Education degree with knowledge of anatomy, exercise physiology, biomechanics, nutrition and periodization is recommended. Being certified as a Strength and Conditioning Specialist (NSCA) is also recommended.

Sport Training: Basketball, Football, Rugby, Volleyball, (including any other school sports)

Facilities: Field and Gymnasium, Weight Room, Track

Equipment Required: Sport Specific Training Equipment, Weight Lifting Equipment, Stability and Balance equipment, Track and Field Equipment (hurdles, blocks, and shot put), Plyometric boxes, Video camera, and other equipment such as bands, chains, parachutes, and sleds.

Course Synopsis: This course has been developed to offer elite athletes a multi-sport training program. The Sports Performance course will develop sport specific skills, fitness, training knowledge, nutrition and personal portfolio creation. School sports and community sports program participation is strongly recommended to applicants. Students will gain knowledge and experience to develop individualized training programs specific to their sport and physical requirements. Students will be required to analyze fitness components by testing and then comparing to norms and sports goals. Students will gain experience in a variety of strength, speed, and power techniques. Students will be using athlete specific training, which involves exercise drills used to simulate athletic movements during their sport. Some examples would be to incorporate speed, agility, multi-directional, plyometrics, and endurance exercises. Self – reflection will be a key component of the course through journaling and self – assessment.

Rationale: This course is offered to meet the needs of high achieving student athletes. These are students with the desire and skills required to perform at high levels of competition in one or more sports. These students require the theoretical and practical experience developed during the course to be able to achieve optimal performance. The course offers the students understanding of the training needs of an elite athlete along with the different types of training required by various sports. Student athletes also require an understanding of how to recover from training to reduce or prevent injuries and the proper steps to recover and caring for injuries. The course will help students develop skills, fitness, knowledge and contacts for elite performance. The focus of the course is to develop well-rounded athletes capable of multi-sport performance before specializing in a single sport. Students will come away with the knowledge and understanding of how to optimize their performance through training to limit injuries and increase physical gains. The knowledge acquired during the course will help students with developing and continuing with progression towards their athletic and general health and fitness goals.

Organizational Structure:

Unit/Topic	Title	Time
Unit 1	Anatomy and Exercise Physiology	10 hours
Unit 2	Biomechanics	5 hours
Unit 3	Bioenergetics (metabolic demands for various sports)	5 hours
Unit 4	Recovery and Overtraining	5 hours
Unit 5	Nutrition	10 hours
Unit 6	Flexibility and Range of Motion	10 hours
Unit 7	Periodization and Design	10 hours
Unit 8	Athlete specific training	65 hours
Total Hours	120 hours	

Unit/Topic/Module Descriptions:

Unit 1: Anatomy and Exercise Physiology

Curriculum Organizers and Learning Outcomes:

It is expected students will:

Identify the basic structures of human anatomy.

Develop an understanding of muscle physiology and how it applies to athletic training.

Develop an understanding of the basic adaptation of the neuromuscular system to different modes of training.

Demonstrate the knowledge of, and ability to apply, basic muscle functions to training regimes.

Demonstrate how to manipulate training variables to achieve optimum gains for athlete specific training.

Unit 2: Biomechanics

Curriculum Organizers and Learning Outcomes:

It is expected students will:

Identify the basic structures of human anatomy.

Develop an understanding of muscle physiology and how it applies to athletic training.

Develop an understanding of the basic adaptation of the neuromuscular system to different modes of training.

Demonstrate the knowledge of, and ability to apply, basic muscle functions to training regimes.

Demonstrate how to manipulate training variables to achieve optimum gains for athlete specific training.

Unit 3: Bioenergetics

Curriculum Organizers and Learning Outcomes:

It is expected students will:

Identify the basic structures of human anatomy.

Develop an understanding of muscle physiology and how it applies to athletic training.

Develop an understanding of the basic adaptation of the neuromuscular system to different modes of training.

Demonstrate the knowledge of, and ability to apply, basic muscle functions to training regimes.

Demonstrate how to manipulate training variables to achieve optimum gains for athlete specific training.

Unit 4: Recovery and Overtraining

Curriculum Organizers and Learning Outcomes:

It is expected students will:

Develop an understanding of the importance of recovery training.

Incorporate a variety of recovery tools into their own training routine.

Develop an understanding of the causes as well as an ability to recognize the signs of overtraining.

Identify and explain the signs of overtraining.

Unit 5: Nutrition

Curriculum Organizers and Learning Outcomes:

It is expected students will:

- Summarize current knowledge of nutritional and dietary factors, especially those that affect athletic performance.
- Create and modify their diet in relation to their athletic needs.
- Develop an understanding of the importance of healthy nutrition and the effects on body composition and performance.
- Explain, compare and contrast the pre and post training meals.
- Monitor eating and hydration habits in a journal.
- Identify the effects of supplementation on the body.

Unit 6: Flexibility and Range of Motion

Curriculum Organizers and Learning Outcomes:

It is expected students will:

- Explain the importance of range of motion and how it can affect performance.
- Demonstrate and identify a variety of stretching and range of motion techniques.
- Demonstrate different types of range of motion exercises into their own athletic training routine.

Unit 7: Periodization and Program Design

Curriculum Organizers and Learning Outcomes:

It is expected students will:

- Develop a needs analysis system to implement a year-round program for multiple sports.
- Develop a template of a structured sports training program using a periodized approach.

Unit 8: Athlete Specific Training

Curriculum Organizers and Learning Outcomes:

It is expected students will:

- Identify and demonstrate correct biomechanics for athletic movements.
- Demonstrate a positive attitude towards exercise.
- Document training and analyze results.
- Improve in a variety of performance related goals such as strength, speed and agility.
- Demonstrate proper safety techniques during training.
- Demonstrate a training regime for their particular sport utilizing the principles they have learned and applying those to their particular sport.

Instructional Component:

An initial assessment of each of each student's athletic fitness and goals will be performed with a discussion on areas of focus and how to develop these areas specific to their athletic needs. Basic understanding of exercise and safety will be discussed and demonstrated by the teacher.

Instruction will continue through active learning, direct instruction, group activities and journaling.

- Direct instruction
- Indirect instruction
- Interactive instruction
- Independent instruction
- Modeling
- Practical Creativity
- Brainstorming
- Group work
- Videotaping
- Analysis of performance videos
- Skill Training Videos
- Biomechanics evaluation

Assessment Component:

Student's letter grades will be based on their ability to demonstrate completion of learning outcomes. All assessment and evaluation will be criteria based.

Formative:

Journal, reflection on training practices.

Meeting fitness improvement goals set out at the beginning of course by student in consultation with the teacher.

Meeting the learning outcomes in regards to training techniques, safety, cooperation and proper usage of equipment.

Daily feedback of student performance.

Summative: (100%)

Fitness Assessment (growth in development) (25%)

Assignments (journal and project mark) (45%)

Quizzes (10%)

Tests (20%)

Learning Resources:

- 1) Essentials of Strength Training and Conditioning, National Strength and Conditioning Association, Thomas R. Baechle. (Text)
- 2) Laboratory Experiments in Human Structure and Function, Banister et al. (Text)
- 3) The Weightlifting Encyclopedia, A Guide To World Class Performance, Arthur Dressler (Text)
- 4) Periodization Training for Sports, Tudor O. Bompa, PhD (Text)
- 5) High - Powered Plyometrics, James C. Radcliffe, Robert C. Farentinos (Text)
- 6) Total Training for Young Champions, Tudor O. Bompa, PhD (Text)
- 7) Dynamic Nutrition for Maximum Performance, Daniel Gastelu, Dr. Fred Hatfield (Text)
- 8) Ultimate Back Fitness and Performance, Stuart McGill, PhD (Text)
- 9) The Stark Reality of Stretching, Dr. Steven D. Stark (Text)
- 10) Websites: myfitnesspal.com and exrx.net
- 11) Personal Profiles – Computer
- 12) Assignments – Computer
- 13) Record Profile – Computer
- 14) Video Analysis – Video Camera
- 15) Video Profile – Video Camera
- 16) Community Facilities
- 17) School District Facilities

Additional Information: