

EXERCISE



SCIENCE

WHAT

Career Technical Ed

This course provides students with the opportunity to explore their interests in the field of health science and medicine, specifically focused towards careers in personal training, strength and conditioning, and sport coaching. This course is designed to familiarize the student with the basics of personal training, specifically the demonstration and execution of exercise technique. Topics that will be explored include systematic strength training, plyometric (explosion) training, speed & agility training, physiology of exercise, and other training methods. This course is designed to prepare students to take the NSCA –Certified Personal Trainer Exam upon completion, at the age of 18.

WHEN

Elective option for grades 11 - 12

**ALL ARE
WELCOME**

ARE YOU

INTERESTED IN:

**Athletics
Exercise Principles
Nutrition
Strength Training
Sport Coaching
Injury Prevention
Training athletes**

FOR MORE INFO:

**Dr. Christine Taylor
taylorc@mhusd.org**



Course Content:

This is a general timeline. Certain topics may require more/less time to cover.

Semester 1:

Unit	Topic
1	Safety and Best Practices for High School Athletes
2	Facility and Equipment Design
3	Structures and Function of Body Systems
4	Biomechanics of Resistance Exercise
5	Bioenergetics of Exercise and Training
6	Endocrine Responses to Resistance Exercise
7	Adaptations to Anaerobic Training Programs
8	Adaptations to Aerobic Endurance Training Programs
9	Age and Sex Related Differences and Their Implications for Resistance Exercises
10	Psychology of Athletic Preparation and Performance
11	Basic Nutrition Factors in Health

Semester 2:

Chapter	Topic
12	Nutrition Strategies for Maximizing Performance
13	Performance-Enhancing Substances and Methods
14	Principles of Test Selection and Administration
15	Warm Up and Flexibility Training
16	Resistance Training Technique and Execution
17	Program Design for Resistance Training
18	Program Design and Technique for Plyometric Training
19	Program Design and Technique for Speed and Agility
20	Program Design and Technique for Aerobic Endurance Training
21	Periodization
22	Rehabilitation and Conditioning