

# **Theory and Practice on Improving Immunity Based on Chinese Traditional Exercises**

## **About this course**

Exercise is medicine. Regular and moderate exercise can effectively strengthen immune system so as to reduce the risk of virus infection and also improve or assist in the treatment of dysthymic disorders like anxiety and depression. This course provides suggestions for the general public about how to actively respond to the outbreak of novel coronavirus. It also explains: how the immune system reacts when viruses invade into the body; why exercises can enhance immunity and what is the mechanism; what the difference is between western sports and traditional eastern exercises. Besides, the course includes training lessons on Daoyin, Badaunjin and other exercises conducive to immunity improvement.

This course is characteristic for its combination of physical education and medicine, so the course will be taught by experts in either sports or medicine. The teaching content covers both disciplinary theory and specific training method, showcasing the unique culture and charm of the East while conducting cross-cultural communication as well as sharing the wisdom of traditional exercises and modern research and application in this regard.

## **Objectives**

1. Knowledge learning: understanding the human immune system, the theoretical basis of enhancing immunity through exercises as well as the similarity and disparity between western sports and traditional eastern exercises.
2. Skill learning: practicing Ma Wang Dui Dao Yin Shu, Baduanjin, and other Chinese traditional exercises conducive to immunity improvement.

## **Syllabus**

01

Introduction (Lecturer: WANG Huiru)

Period

- 1.1 Introduction to the Course
- 1.2 Overview of Ma Wang Dui Dao Yin Shu
- 1.3 Overview of Baduanjin

02

Active Response to Public Health Emergency (Lecturer: XU Gang/ WANG Huiru)

Period

- 2.1 Practice: Ma Wang Dui Dao Yin Shu (1-2)
- 2.2 The concept and classification of emergency public health events
- 2.3 The characteristics and hazards of emergency public health events
- 2.4 The coping strategies and preventive measures for emergency public health events

03

Human Immune System (1) (Lecturer: WANG Feng/ WANG Huiru)

Period

- 3.1 Practice: Ma Wang Dui Dao Yin Shu (3-4)
- 3.2 Introduction of Immune system
- 3.3 The concept of immunity, innate immunity and adaptive immunity
- 3.4 Introduce the early stage of immunology research

04

Human Immune System (2) (Lecturer: WANG Feng/ WANG Huiru)

Period

- 4.1 Practice: Ma Wang Dui Dao Yin Shu (5-6)
- 4.2 Introduce Nobel prize related with immunology
- 4.3 Master immune system components and their basic functions
- 4.4 Introduce the discovery of T cell receptor, the specificity concept in immunology, and the art of Immune system

05

The Theoretical Basis of Exercises Improving Human Immunity (1) (Lecturer:

HUANG Tao/ WANG Huiru)

Period

- 5.1 Practice: Ma Wang Dui Dao Yin Shu (7-8)
- 5.2 Moderate Exercise and Disease Prevention—the Importance of Immune System
- 5.3 Physical Activity Guidelines
- 5.4 Characteristics of Traditional Eastern Exercises and their Relevance to Health and Immunity

06

The Theoretical Basis of Exercises Improving Human Immunity (2) (Lecturer:

HUANG Tao/ WANG Huiru)

Period

6.1 Practice: Ma Wang Dui Dao Yin Shu (7-8)

6.2 Immune Responses to Exercise

6.3 Exercise Workload, Infection Risk, and Illness Risk

6.4 Exercise and immunosenescence

07

Cases of Eastern Exercises Improving Human Immunity (Lecturer: YUAN Xiaoling/

WANG Huiru)

Period

7.1 Practice: Ma Wang Dui Dao Yin Shu (9-10)

7.2 General Introduction of Mind-body Therapies

7.3 Two-Benefits for Yoga Practice on Healthy Population and Cancer Survivors

7.4 Three- Benefits for Qi-gong and Tai Chi Practice on Healthy Population

7.5 Effects of Mind-Body Therapies on the Immune System

08

Traditional Chinese Exercise (Daoyin) (Lecturer: WANG Huiru)

Period

8.1 A Brief Introduction to Daoyin

8.2 Practice: Ma Wang Dui Dao Yin Shu (11-12)

09

Baduanjin (1) (Lecturer: WANG Huiru)

Period

9.1 A Brief Introduction to Baduanjin

9.2 The Practice of Baduanjin (1-3)

10

Baduanjin (2) (Lecturer: WANG Huiru)

Period

10.1 The Practice of Baduanjin (4-6)

## 10.2 Review Ma Wang Dui Dao Yin Shu

11

Baduanjin (3) (Lecturer: WANG Huiru)

11.1 The Practice of Baduanjin (7-8)

11.2 Review Ma Wang Dui Dao Yin Shu

12

The key points of examination and general review (Lecturer: WANG Huiru)

Period

12.1 The key points of examination

12.2 Review Ma Wang Dui Dao Yin Shu

12.3 Review of Baduanjin

## **Grading Criteria**

### **Theoretical part 40%**

In this course, you will be graded on the three areas listed below:

1. Participation (20%): participating in the discussion on the “Course Discussion” forum and contributing no less than 10 postings and replies are required for a full score.
2. Quizzes (60%): each quiz consists of 5 multiple-choice questions with 1 point for each question and 5 points in total. There are altogether 8 chapter quizzes in this course.
3. Final Examination (20%): the final examination consists of 20 multiple-choice questions and 20 true-or-false questions with 1 point for each question and 40 points in total.

### **Practice 60%**

You may choose one of Ma Wang Dui Dao Yin Shu or Baduanjin as the final practice examination

### **The grading criteria of this course:**

Pass: 60 and above; Excellence: 80 and above.

### **Class Participation**

Students are encouraged to actively participate in the class discussion as well as the discussion board online. Such activities include good comments, questions, and articles.