

## Research Article

# A Template for Establishing a Tai Chi Program in a University or Medical School

## Abstract

Tai chi is both a martial art and a form of Traditional Chinese Medicine [TCM]. It has been used to treat a wide variety of ailments for hundreds of years. It is a gentle form of exercise, often referred to as a form of moving meditation that incorporates mindfulness and a special kind of breathing that enhances creativity as well as strengthening the body's natural immune system. Thousands of medical studies have found it to be an effective form of treatment. In recent decades, Western medical professionals have started to incorporate it into their medical practices as a supplement to mainstream treatments in a wide range of areas, including Alzheimer's, dementia, Parkinson's and other neurodegenerative diseases, Arthritis, Cancer, COPD, Coronary Heart Disease, Anxiety and Depression, Diabetes, Hypertension, Insomnia, Osteoporosis and overall quality of life, to name a few. Some medical schools have incorporated tai chi into their curriculum, but interest in tai chi has not been limited to medical schools. Pharmacy schools, physical therapy programs, departments of physical education, dance, music and theater have also started to include tai chi in their programs. Due to its interdisciplinary nature, tai chi would also be a good fit for physician assistant and nursing programs as well as public health and Asian studies departments. The present paper provides a template that universities and medical schools can use as a starting point for establishing a tai chi program into their curriculum, either as a major, minor or set of elective courses. Students who successfully complete a program along the lines of the one offered in this paper might also be able to pass one or more tai chi and qigong duan (black belt) exams.

**Keywords:** Tai Chi, Qigong, Traditional Chinese Medicine, TCM, Martial Art, Mindfulness, Meditation

## Introduction

This proposal provides a template that universities and medical schools can use as a starting point to create and implement a tai chi program. There is enough breadth and depth to offer a full major that could easily be incorporated into several academic disciplines. Graduates of this program might be able to pass one or more duan (black belt) exams in both tai chi and qigong [pronounced chee gong] and will have a sufficiently strong foundation to continue their studies to a more advanced level. Medical schools could offer some of the proposed courses to introduce their students to the basic concepts of tai chi, which will provide them with a better understanding of how tai chi can be utilized as part of their medical practice or research. Students who are not in a medical field can also benefit from these courses because tai chi is useful in preventing or treating depression, anxiety and insomnia.

## What is Tai Chi?

Tai chi is both a martial art and a form of Traditional Chinese Medicine [TCM]. It is a form of moving meditation that includes both mindfulness and a special kind of breathing. Thousands of medical studies have found it to be effective as a supplementary treatment for a wide range of maladies, including Alzheimer's, dementia, Parkinson's and other neurodegenerative diseases [1-6], arthritis [7-11], cancer [12-20], Chronic Obstructive Pulmonary Disease (COPD) [21-26], coronary heart disease [27-32], anxiety and depression [33-38], diabetes [39-44], hypertension [45-50], insomnia [51-58], osteoporosis [59-65] and quality of life [66-70] to name a few [71-78]. In China it is even used as a primary treatment in some cases. A word search for "tai chi" in the PubMed database [79] got 4,645 hits. A search for "taiji" got 2,978 hits.

## Cross Listing

Due to the interdisciplinary nature of tai chi, it is an ideal course for cross-listing among disciplines. Some possibilities include:

- Asian Studies
- Dance Department
- Medical School

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Music Department  
Nursing School  
Pharmacy School  
Physical Education Department  
Physical Therapy Program  
Physician Assistant Program  
Public Health Program  
Theater Department

### **Some Existing Programs**

#### **Asian Studies**

A cursory Google search did not find any Asian Studies programs that have one or more tai chi courses, but that does not mean that such courses do not exist. Tai chi is more than just an exercise program. It is based on thousands of years of Chinese culture and philosophy. A course on tai chi would fit nicely in an Asian Studies curriculum [108].

#### **Dance Major**

The University of Michigan offers tai chi classes to its dance majors [102]. One reason tai chi classes are sometimes included in a dance curriculum might be because studies have found that incorporating tai chi into dance enhances dance skills and artistic expression. A Chinese study found that incorporating tai chi into the dance curriculum enhanced students' creativity and perceptivity [109]. Numerous videos are available that demonstrate how tai chi has been incorporated into Chinese dance routines [110]. Tai chi principles can be used to enhance many other forms of dance as well. Tai chi and ballet have some common characteristics. Both enhance balance, coordination and agility, which makes them potential treatment options for individuals having Multiple Sclerosis (MS) or problems with motor skills. Classical ballet and tai chi both place high cognitive demand on those who practice them. Both involve continuous and total body movement. Both are low-impact and highly concentrated. Their load-bearing exercises improve bone density and help to repair the myelin sheath [111]. Thus, it seems that ballet dancers could benefit by incorporating tai chi into their study plan. Perhaps tai chi practitioners could benefit by taking some ballet lessons as well, although tai chi does not require extreme stretching and does not place pressure on the toes, unlike ballet.

#### **Medical Schools**

Harvard Medical School offers a certificate program in tai chi. It has also published the leading book on tai chi from a medical perspective – *The Harvard Medical School Guide to Tai Chi* [80].

Duke University Hospital offers classes in Tai Chi for Arthritis, Tai Chi for Cancer and Tai Chi for Energetic Balance through the Duke University Hospital [85]. The Duke Cancer Center offers free tai chi classes [86]. The Vanderbilt Medical School, through its Osher Center for Integrative Health, offers tai chi classes to the patients in its hospital as well as to members of the general public [92]. The Stanford Medical School offers tai chi classes that are open to the general public [94] and also offers tai chi and qigong classes to its Parkinson's Disease patients [95]. The Mayo Clinic uses tai chi to treat cancer patients [96, 97]. The Smilow Cancer Hospital Care Center, which is affiliated with Yale University, offers tai chi classes that are free for patients [105]. Tai chi is taught to patients in Veterans' hospitals. [112].

#### **Music Departments**

The Berklee College of Music offers several tai chi and qigong courses, including Tai Chi Chuan for Musicians I & II; Integral Tai Chi; Playing in the Key of Qi: Tai Chi for Musicians; and Qigong, Musicianship, and the Mastery of Creativity. The goal of these courses is to increase relaxation, mental clarity and creativity and to get in touch with their inner energy. One of the forms it includes in its curriculum is the William C.C. Chen Yang 60 form [81].

The School of Music, Theater & Dance at the University of Michigan offers free tai chi classes to its students [102]. Lou Reed (1942-2013), musician, songwriter and member of The Velvet Underground, practiced tai chi throughout his adult life. A book of his unpublished writings on tai chi was edited by his wife and others [82]. The professor who teaches the Alexander Technique at the Manhattan School of Music incorporates tai chi principles into her teaching [83]. Violet Li (2011) wrote an article about a music professor at the Blair School of Music at Vanderbilt University who taught tai chi to students, and who, through his research, learned that tai chi courses

were also taught at Southern Methodist University, Webster Conservatory and Southern Illinois University through their theater departments. The Juilliard School also taught tai chi classes at the time that article was written [91]. Tai chi seems to be popular in music departments not only for its relaxation benefits but also because of the belief that the practice of tai chi can relieve repetitive stress injury or repetitive motion disorder [91].

### **Nursing Schools**

Edna Green wrote a doctoral dissertation titled *Developing a Tai Chi Education Module for Nurses* [106]. Since nursing is one of the medical professions, it makes sense that a nursing school would offer one or more tai chi courses as part of its curriculum. Miller et al. [107] also addressed this issue.

### **Pharmacy Schools**

The Massachusetts College of Pharmacy and Health Sciences offers a number of courses in traditional Chinese medicine, including Mind/Body Medicine (BEH405), Koru Mindfulness Meditation for Stress Reduction (PPW357), Koru Mindfulness Meditation for Stress (PPW371.KK), History of Chinese Medicine (SACAS.510), Traditional Chinese Medicine Theory I (SACAS.511), Traditional Chinese Medicine Theory II (SACAS.524), Chinese Nutrition (SACAS.718), Survey of Chinese Classical Medical Texts (SACAS.729), Introduction to Chinese Herbal Medicine (SACHEM.520), Chinese Herbs I (SACHM.531), Chinese Herbs II (SACHM.612), Chinese Herbal Dispensary Assistantship (SACHM613), Chinese Herbal Formulas I (SACHM624) and Chinese Herbal Formulas II (SACHM635) [89].

### **Physical Education Departments**

Columbia University and Barnard College offer a tai chi course in their physical education programs that is taught by a professional musician who has several decades of tai chi experience. Duke University offers at least two courses in tai chi through its Department of Health, Wellness and Physical Education (Phys Educ 165 & 166) [87]. The University of Massachusetts – Amherst offers a tai chi class in its Physical Education Department [99]. George Mason University offers a course in tai chi through its College of Education and Human Development [88]. Seward County Community College (Kansas) offers tai chi classes through its Physical Education Department [93].

### **Physical Therapy Programs**

Some physical therapists who are associated with the University of Wisconsin Physical Therapy program teach tai chi and use it on their patients [98]. The Doctor of Physical Therapy Program at the University of Wisconsin-Madison offers several tai chi courses [103].

### **Physician Assistant Programs**

Although a cursory Google search did not find any tai chi courses offered in a physician assistant's program, that does not mean that such courses do not exist. Tai chi courses are offered in some medical schools, including Harvard, Duke, Vanderbilt and Stanford, so it seems they would be a good fit for a PA program as well.

### **Public Health Programs**

A course or two in tai chi would be a good addition to a public health curriculum [113].

### **Theater Departments**

UCLA [100], Southern Methodist University, Webster Conservatory and Southern Illinois University have offered tai chi classes through their theater departments [91]. The School of Music, Theater & Dance at the University of Michigan offers free tai chi classes to its students [102].

### **Other**

Clark College offers tai chi classes in its Community and Continuing Education program. It teaches the Yang 24 form and tai chi walking. The Maryland Health & Wellness Center offers a variety of tai chi classes, including Tai Chi for Arthritis, Tai Chi for Back Pain, Tai Chi for Neck and Shoulder Pain and 13 Posture Tai Chi as well as the Yang 24 form [101]. Duke University offers an online class in tai chi mindfulness through its Continuing Studies Program. Michigan State University Extension offers courses in Tai Chi for Arthritis and Tai Chi for Better Sleep [90]. Yale University has a Tai Chi Study Group that is not affiliated with any particular department [104].

### **Proposed Curriculum**

The proposed curriculum includes courses in both the Yang and Sun styles of tai chi (Taiji) as well as qigong, which basically emphasizes the internal aspects of tai chi. Yang style is the second oldest tai chi style and is the most popular tai chi style. It is practiced by more people worldwide than any other style. It is also the tai chi style

most used to treat patients, and the tai chi style most used in medical studies [114]. When the Yang style is used, the Yang 24 is the most frequently used form [115]. The Yang 24 form is also a competition form, and a form that can be used when taking a duan (black belt) exam. Thus, there are several good reasons to include the Yang 24 form in a tai chi curriculum. Indeed, omitting the Yang 24 form from a tai chi curriculum would weaken the quality of the program substantially. Many study materials are available for the Yang 24 form. The Sun style is the youngest of the five main tai chi styles and is often used to treat senior citizens. One advantage of the Sun style is that it does not have any low stances, which is especially important for seniors, many of whom have balance issues. Dr. Paul Lam developed a program for arthritis and fall prevention using the Sun style that has been adopted and is being taught in 27 countries [116]. Dr. Lam has made a series of excellent DVDs that can be used to teach both the Sun and Yang styles. Thus, there are good reasons to include the Sun style in the curriculum.

Countries Where Dr. Paul Lam's Courses re Taught [27 Countries]				
Australia	France	Jordan	Romania	Switzerland
Belgium	Germany	Kuwait	Saudi Arabia	United Kingdom
Canada	Greece	Netherlands	Singapore	United States
Croatia	India	New Zealand	South Korea	
Cuba	Ireland	Portugal	Sri Lanka	
Egypt	Italy	Puerto Rico	Sweden	

There are thousands of qigong forms. The good news is that there is no need to learn more than a small percentage of them. The qigong forms included in this curriculum proposal include the most popular and widely practiced qigong forms. Ba Duan Jin is the qigong form practiced most often on a worldwide basis. It is also the most popular qigong form used in medical studies. There are four qigong forms that are used more frequently than others in martial arts tournaments. All four of those forms are included in the qigong curriculum. These four forms can also be used to take some of the qigong duan (black belt) exams. Excellent study materials are available for these and other qigong exercise sets. Students who complete this curriculum might be able to pass the first and second degree duan exam in tai chi and perhaps one to three of the duan exams in qigong.

### Course Description

Inclusion of all of the courses listed below would be sufficient to offer a major in tai chi. Additional courses could be added, but the courses listed below would be sufficient to get the tai chi program up and running. These courses provide the foundation for further study. Institutions that prefer to offer fewer courses could cherry pick the courses that seem right for them. Due to the interdisciplinary nature of tai chi, these courses could be cross listed to include several academic majors. Special courses could be customized to suit the various disciplines. For example, a medical school tai chi course could place more emphasis on the medical applications and research aspects of tai chi, whereas a tai chi course offered in a physical education department could emphasize the physical aspects of tai chi. These basic courses could be customized to have versions that are appropriate for both undergraduate and graduate studies.

#### TAI CHI 101 Introduction to Yang Style Tai Chi

Prerequisite: None

Introduction to Yang style tai chi. The philosophy of tai chi. Study of the Yang 8 form. Introduction to qigong. Introduction to the Yang 24 (competition) form. Yang style tai chi is the most popular tai chi style. It is practiced all over the world. It is a form of Traditional Chinese Medicine (TCM) as well as a gentle exercise routine. Regular practice of tai chi and qigong strengthens the body's immune system. In recent decades it has been adopted as a supplementary treatment in Western medical practices for a wide range of ailments. The Yang style is the style most used in medical studies. The Yang 24 form is the tai chi form most used in Yang medical studies. No medical knowledge is required to learn any tai chi style.

#### TAI CHI 102 Intermediate Yang Style Tai Chi

Prerequisite: TAI CHI 101

Continuation of TAI CHI 101. The philosophy of tai chi. Qigong. Detailed practice of the first third of the Yang 24 (competition) form. Practice of other Yang style postures.

#### TAI CHI 103 Introduction to Sun Style Tai Chi

Prerequisite: None.

Introduction to Sun style tai chi. The philosophy of tai chi. Study of basic forms. Introduction to qigong. Sun

style is the youngest of the five main tai chi styles. It is especially suitable for senior citizens because it does not have any low stances. It is a form of Traditional Chinese Medicine (TCM) as well as a gentle exercise routine. Regular practice of tai chi and qigong strengthens the body's immune system. In recent decades it has been adopted as a supplementary treatment in Western medical practices. No medical knowledge is required to learn any tai chi style.

#### **TAI CHI 104 Intermediate Sun Style Tai Chi**

Prerequisite: TAI CHI 103

Continuation of TAI CHI 103. The philosophy of tai chi. Qigong. Introduction to the Sun 73 form.

After completing this course, students might be able to pass a Sun style certification exam.

#### **TAI CHI 105 Qigong 1**

Prerequisite: None

Introduction to qigong exercises and meditation. The Ba Duan Jin and Yi Jin Jing competition forms. Qigong has been around for thousands of years. It is a form of Traditional Chinese Medicine (TCM) as well as a gentle exercise routine. Regular practice of qigong strengthens the body's immune system. In recent decades it has been adopted as a supplementary treatment in Western medical practices. The Ba Duan Jin form is the qigong form most frequently used in medical research. No medical knowledge is required to learn any qigong form.

#### **TAI CHI 106 Qigong 2**

Prerequisite: None

Introduction to qigong exercises and meditation. Qigong basics. The Liu Zi Jue and Wu Qin Xi competition forms. Qigong has been around for thousands of years. It is a form of Traditional Chinese Medicine (TCM) as well as a gentle exercise routine. Regular practice of qigong strengthens the body's immune system. In recent decades it has been adopted as a supplementary treatment in Western medical practices. After completing TAI CHI 105 and 106, students might be able to pass the first degree duan (black belt) exam in qigong.

#### **TAI CHI 201 Advanced Yang Style Tai Chi 1**

Prerequisite: TAI CHI 102

Tai chi philosophy. Qigong. Creative Yang style forms. Detailed practice of the second third of the Yang 24 (competition) form.

#### **TAI CHI 202 Advanced Yang Style Tai Chi 2**

Prerequisite: TAI CHI 201

Continuation of TAI CHI 201. Creative Yang style forms. Perfection of the Yang 24 (competition) form. After completing this course, students might be able to pass the first degree duan (black belt) exam in tai chi.

#### **TAI CHI 203 Advanced Sun Style Tai Chi 1**

Prerequisite: TAI CHI 104

Tai chi philosophy. Qigong. Creative Sun style forms. Continuation of the Sun 73 form.

#### **TAI CHI 204 Advanced Sun Style Tai Chi 2**

Prerequisite: TAI CHI 203

Tai chi philosophy. Qigong. Creative Sun style forms. Perfection of the Sun 73 form. After completing this course, students might be able to pass the first degree duan (black belt) exam in tai chi.

#### **TAI CHI 205 Tai Chi Weapons**

Study of the Chinese broadsword (dao).

Prerequisites: TAI CHI 102 or 104.

This course partially prepares students to pass the 2<sup>nd</sup> degree duan (black belt) exam in tai chi.

#### **TAI CHI 206 Medical Tai Chi and Qigong**

Tai chi and qigong forms. Research in medical tai chi and qigong.

Prerequisite: None. May be repeated.

## TAI CHI 207 Independent Study in Tai Chi and Qigong

Exploration of select topics in tai chi and qigong. Customized to student needs.

Prerequisite: None. May be repeated.

### Concluding Comments

This proposed template provides a starting point that can be used by universities and medical schools to carve out a customized tai chi study program that will meet the needs of their students. Universities may decide to adopt the entire proposal, which would be sufficient for a major in tai chi, or they could use a cafeteria approach and adopt just the parts that are most suitable to their student audience. Due to the interdisciplinary nature of tai chi, these proposed courses could be cross-listed, which would make the courses available to several majors.

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