

A woman with blonde hair and glasses, wearing a white turtleneck and a blue patterned scarf, is holding a small anatomical model of a human heart. The model is pink and red, showing the internal chambers and major blood vessels. She is looking down at the model with a slight smile.

SECTION FIVE

*Integrative Health Science*

Health is  
the greatest  
possession.

Contentment is the  
greatest treasure.

Confidence is the  
greatest friend.

—Lao Tzu

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# About the Program

## Overview

The key word describing Tai Sophia's newly formed Integrative Health Sciences program (ISci) is integration: integration of modern cutting-edge science and ancient traditions; integration of a variety of world perspectives on healing; integration of all of the graduate degree programs in the Institute - our programs based on healing presence, on wellness and on the mission of Tai Sophia.

## Purpose

The ISci program provides a foundational underpinning in health sciences in support of all the Institute's programs. As a requirement for the master's degree in acupuncture, the ISci program offers 30 credits in bioscience as required by ACAOM. The program supports prerequisite offerings in physiology for herbal medicine students. In the future, we will integrate new courses with the Master of Arts in Transformative Leadership and Social Change program and other new degree programs within the Institute. In the ISci program, courses have been designed around the science of wellness to uniquely meet the needs of our current students and to serve as a foundation for future students.

## Program Goal

The goal of the ISci program is to support learning in every aspect of the Institute by offering novel and unique foundational biosciences focused on cutting-edge science and research that supports wellness and complements traditional teachings.

## Admissions & Academic Calendar

Currently, courses offered in the ISci program primarily support the Master of Acupuncture program. For information on admissions and academic programs, please refer to the Acupuncture program section in the catalog.

# Course Descriptions

## ISci 602

### Critical Thinking Skills

#### 3 Semester Credits

"Thinking about Thinking" could be an alternative title to this Tai Sophia course, which empowers students with a set of skills that support efforts to conceptualize, apply, analyze, synthesize and/or evaluate information, and to expand their approach to new concepts in bioscience. A special emphasis will be placed on research pertinent to wellness and complementary medicine.

## ISci 613B

### Cultural Perspectives on Health

#### 2 Semester Credits

This course is an examination of the diversity of healing systems around the planet. Students will study in depth various cultural approaches to major health issues and to bioscientific perspectives.

## ISci 615

### Mind-Brain-Spirit

#### 3 Semester Credits

As modern neuroscience reveals more about the nervous system, we are developing new ways of looking at concepts such as emotion, cognition, spirituality and mind-body medicine. This course will focus on discussion of current scientific discoveries and the role they may play in our ever-shifting understanding of the human mind. Prerequisites: ISci 640 & 645.

## ISci 621B

### Physics & Energy

#### 2 Semester Credits

The relationship between modern physics and complementary medicine is rarely defined in a careful, systematic manner. This course will start with an examination of core concepts in modern physics (including particle physics), and look at the relationship between these ideas and current thoughts around healing modalities.

## ISci 623B

### Ecobiology & Human Health

#### 2 Semester Credits

Humans have evolved in a symbiotic relationship with many other plant and animal species on Earth; biologists use the term "co-evolution" to describe this process. In this course, students will look at the health of our planet and the way changes in our ecosystem may affect our health and wellness.

## ISci 629

### Fall Bioscience Symposium

#### 1 Semester Credit

Tai Sophia's annual Fall Bioscience Symposium draws experts and leaders in existing and emerging scientific fields from around the world to discuss complementary medicine and the science of wellness and healing. The symposium is open to the community and presents an opportunity for discussion of current theories and new ideas. Students must attend both days and complete all assessments for credit. This course may be repeated for additional credits.

**ISci 632****Foundations of Health and Wellness****3 Semester Credits****(Graduate certificate programs only)**

This course provides a context for a wide variety of studies relating to perspectives on wellness by introducing basic health philosophies, history of the current health care system, current proposed healthcare reform legislation, balance/imbalance in health, and the investigation of how these issues apply to an informed perspective on our current healthcare system. The foundations of health and wellness are further examined focusing on the current knowledge of the physiologic basis for common wellness practices.

**ISci 640****Clinical Anatomy****3 Semester Credits**

This course looks at different regions of the body (both in health and in disease), examining both the surface anatomy and deep anatomy of the region. The course is designed to support the study of Point Location in the Acupuncture program and may be useful for anyone entering a healthcare field.

**ISci 441/641****Functional Physiology****3 Semester Credits**

This course reviews the essential elements of physiology, focusing on each of the body's systems from a bioscientific perspective. This course may be used as a prerequisite for entry into the Herbal Medicine Program.

**ISci 645****The Physiology of Wellness****3 Semester Credits**

By focusing on a bioscientific perspective of the integration and regulation of physiologic systems in the human body when in a balanced state, students will learn current theories on the science underlying processes that play an important role in wellness (e.g., breathing, sleep, exercise). Homework encourages the student to examine these processes in their own bodies and lives. Prerequisite: ISci 640.

**ISci 650****Imbalance: Pathophysiology****3 Semester Credits**

In this course the student will examine the role played by external forces (toxins, infections, trauma) and internal changes (imbalances in chemical messengers) that lead to pathophysiological changes associated with biomedical disease. This course examines what moves the body out of balance. Prerequisites: ISci 640 & 645.

**ISci 660****Seasons of Life: Human Development****3 Semester Credits**

This course examines the art of living and dying in various stages of the human life cycle. Students are asked to note phenomena about each stage from a variety of perspectives including physical, cognitive, social and spiritual. After examining the phenomena, we will review theories about each stage from bioscience and from other cultures. Prerequisites: ISci 640 & 645.

**ISci 665****Community & Health in Balance****3 Semester Credits**

As an examination of the role of societal causes of imbalance (e.g., violence, crime, poverty, addictions), this course supports the students' work at Tai Sophia's Community Clinic sites. The course will also emphasize skills that students can use to respond appropriately to different social/cultural groups. Training in emergency situations and blood-borne pathogens is included in this course.

**ISci 690****Independent Project****1 Semester Credit**

This one-credit course offers students an opportunity to participate in the creation of a scholarly work such as a research paper, reference summary or patient education materials. Students work with the Program Director and Reference Librarian to develop both their writing and research skills. Students must obtain permission from the Program Director to register for this course. This course may be repeated for additional credits.

**ISci 737****Food as Medicine****3 Semester Credits**

Nutrition is one of many tools that can help support balance and wellness in one's life. After reviewing basic principles in nutritional science, students will learn the role that food plays in healing and how the environment impacts our health. Current approaches to nutritional therapy are reviewed for their role in creating wellness. This course will support students wishing to integrate nutrition into their personal life and/or future careers. Prerequisites: ISci 640 & 645.

**ISci 755****Biomedicine****3 Semester Credits**

This course will examine the approaches used in conventional medicine to restore health. From the techniques used to arrive at a diagnosis, to pharmacologic and surgical interventions used to treat patients, many aspects of conventional medicine will be reviewed. Additionally, we will explore the signs and symptoms of common diseases, with a special emphasis on situations where the patient would benefit from referral to a conventional medicine practitioner. Prerequisites: ISci 640, 645 & 650.

# Faculty Biographies

## Program Director

Kimberly L.K. Duncan, PhD

Kimberly received her Ph.D. in pharmacology from the Mayo Graduate School of Medicine and worked in drug development for close to 30 years at the NIH and the Johns Hopkins University in the United States and at Cambridge University, in England. She holds a faculty appointment at Johns Hopkins University School of Medicine. Kimberly joined the faculty of Tai Sophia Institute in 2006 teaching Clinical Sciences and Clinical Pathology in the Acupuncture program and exploring research opportunities for the Institute. In addition to her role as director of the Integrative Health Sciences program, she teaches and designs courses for the program that seek to integrate studies in wellness and biomedicine with the traditional teachings of the Institute.

# Additional Information

## Bioscience Requirements in the Master of Acupuncture Program

Students in the Master of Acupuncture program are required to complete 30 credits in the ISci program. The required sequence of courses is listed below. Students must complete all nine three-credit courses as indicated below plus three additional credits of elective coursework.

## ACU Bioscience Course Requirements

Trimester	Course
<b>Level I: The body in balance</b>	
1	ISci 640 Clinical Anatomy
2	ISci 645 Wellness Physiology
3	ISci 660 Seasons of Life: Human Development

### Level II: Moving out of balance

4	ISci 665 Community & Health In Balance
5	ISci 650 Imbalance: Path physiology

### Level III: Approaches to recovering balance

6	ISci 602 Critical Thinking Skills
7	ISci 737 Food as Medicine
8	ISci 615 Mind-Brain-Spirit
9	ISci 755 Biomedicine

### Electives:

Acupuncture students are required to complete three elective credits in the Integrative Health Sciences. Options for elective courses are listed below and should be completed by the seventh trimester. Many are offered in a weekend format. Elective courses will be taught only at least seven students are registered. Options include:

### Two-Credit Courses:

- ISci 613B Cultural Perspectives on Health
- ISci 621B Physics & Energy
- ISci 623B Ecobiology & Human Health

### One-credit Courses:

- ISci 629 Fall Bioscience Symposium\*
- ISci 690 Independent study\*

\*May be taken more than once