The Mystery of Acupuncture and Moxibustion

Department: Fudan International Summer Session 2025

<table>
<tr><td>Course Code</td><td colspan="7">TBA</td></tr>
<tr><td>Course Title</td><td colspan="7">The Mystery of Acupuncture and Moxibustion</td></tr>
<tr><td>Credit</td><td>2</td><td>Experiment (including Computer) Credit</td><td>0.5</td><td>Practice Credit</td><td>0</td><td>Aesthetic Education Credit</td><td></td></tr>
<tr><td>Credit Hours Per Week</td><td>9 credit hours per week, 36+3 credit hours in total</td><td>Education on The Hard-Working Spirit Credit Hours</td><td></td><td>Language of Instruction</td><td>English</td><td>Honors Course</td><td>□Yes
☑No</td></tr>
<tr><td>Course Type</td><td colspan="3">☐Core General Education Course
☐Specific General Education Course
☐Basic Course in General Discipline
☑Others</td><td colspan="4">2+X Major ：
☐Professional Core Course
☐Professional Advanced Course
Non 2+X Major ：
☐Professional Compulsory Course
☐Professional Elective Course</td></tr>
<tr><td>Course Objectives</td><td colspan="7">（Including value, knowledge and ability objectives）
1. Understand the origin, development, clinical application and dominant diseases of acupuncture and moxibustion;
2. Be familiar with the experimental progress and scientific research of acupuncture and moxibustion in the treatment of pain, mental disorders, reproductive metabolic diseases, degenerative diseases, bone and joint diseases, etc.</td></tr>
<tr><td>Course Description</td><td colspan="7">This course has a total of 36 class hours, mainly taught in class, including classroom discussions and questioning. Using course reports as the assessment method.
Our department has been engaged in the mechanism research of acupuncture and moxibustion and Qigong since 1958, and has accumulated a lot of clinical and experimental experience in the treatment of diseases with acupuncture and moxibustion. In recent years, the Department has published high scoring papers on acupuncture analgesia, antidepressant, female reproductive diseases, multiple sclerosis, perioperative period, and tumor chemoradiotherapy in Nature, Neuron, Nature Communication, etc. On the basis of the undergraduate and graduate courses of Basic Introduction to Integrated Traditional Chinese and Western Medicine offered by our department, the English course is designed to deeply explore the long history, theoretical basis and practical application of acupuncture</td></tr>
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	and moxibustion, a traditional Chinese medicine practice, which has had a profound impact on global health and well-being and promoted cultural exchange and understanding. Through learning acupuncture and moxibustion technology, meridian system and acupoint positioning, introduce the latest research of acupuncture and moxibustion in neurobiology and physiological effects, enrich students' academic experience, and make contributions to the global medical and health dialogue.

Course Requirements:

1. Undergraduate and graduate students majoring in Traditional Chinese Medicine
2. Have good practice ability
3. Attending lectures and visiting on site
4. Be encouraged to read related papers and participate in group discussion in class

Teaching Methods:

- Lecture
- Visiting
- Practice

Course Director's Academic Background:

Yi Feng Ph.D. & M.D. Professor

Dr. Yi Feng is a professor of Integrative Medicine and Neurobiology of Shanghai Medical College, Fudan University. She obtained her Ph.D. in Neurobiology and Integrative Medicine at Fudan University in China, then a visiting scholar at Gothenburg University of Sweden during 2008-2009 and worked at Stanford University as a visiting associate professor from 2013-2016.

Dr. Feng focuses on her study on the effect and mechanism study of acupuncture on gynecological diseases, such as perimenopausal syndrome and polycystic ovary syndrome by using cellular and molecular technology, as well as 3D tissue clearing imaging and *in vivo* near-infrared II live imaging. Her research has been supported by the Chinese Special Fund for Postdoc, the Chinese Post-doc Fund, and the National Science foundation of China (NSFC) etc. By far, she has published 60 scientific papers and 17 scientific books.

She is good at teaching and clinic. By far, she is involved in 9 undergraduate courses such as *Introduction to Integrated Traditional Chinese and Western Medicine, Multidisciplinary Teaching Based on Diseases, Masters of Traditional Chinese and Western Medicine and Humanistic Literacy, Darwin's Evolutionary Theory and Modern Medicine,* and 6 graduate courses. She also led undergraduate and graduate students in science and technology innovation, winning multiple awards.

Publications:

(1) 演化医学启示录--人类疾病的过去与未来 .复旦大学出版社. 2022.9 薛人望 **冯异** 主编 978-7-309-16106-9 307 千字

(2) 医学组织透明化三维成像. 复旦大学出版社. 2020.6 978-7-309-14885-5 **冯异** 主编 358 千字

(3) Yan Xiao1,2,，#, Lixia Yang3，#，Yicong Wang1,2,, Yu Wang1,2, , Yuning Chen1 , Wenhan Lu4 , Zhenle Pei1 , Ruonan Zhang1 , Yao Ye5 , Xiaowei Ji5 , Suying Liu5，Xi Dong5 , Yonghua Xu3,* , **Yi Feng**1,2,*. Pulsed Low-intensity focused ultrasound (LIFU) activation of ovarian follicles. IEEE Open Journal of Engineering in Medicine and Biology. 2024;5:316-329.

(4) Wei Hu#; Lu Meng#; Chao Wang; Wenhan Lu; Xiaoyu Tong; Rui Lin; Tao Xu; Liang Chen; An Cui; Xiaoqing Xu; Anni Li; Jia Tang; Hongru Gao; Zhenle Pei; Ruonan Zhang; Yicong Wang; Yu Wang;

Wendong Han; Ning Jiang; Chenglong Xiong; **Yi Feng***; Kuinyu Lee*; Mingquan Chen*. Spatiotemporal observations of host pathogen interactions in mucosa during SARS-CoV-2 infection indicate a protective role of ILC2s. Microbiology Spectrum. 2023 Dec 12;11(6):e0087823. doi: 10.1128/spectrum.00878-23. Epub 2023 Nov 8.

(5) Chang J, Guo B, Gao Y, Li W, Tong X, **Feng Y*,** Abumaria N*. Characteristic Features of Deep Brain Lymphatic Vessels and Their Regulation by Chronic Stress. Research 2023;6:Article 0120. https://doi.org/10.34133/ research.0120

(6) Cheng-Feng He, Wen-Jiao Xue , Xiao-Die Xu, Jian-Tao Wang , Xin-Ru Wang, **Yi Feng***, Hou-Guang Zhou* and Jing-Chun Guo*. Knockdown of NRSF Alleviates Ischemic Brain Injury and Microvasculature Defects in Diabetic MCAO Mice. Front. Neurol. 13:869220. doi: 10.3389/fneur.2022.869220

(7) Feifei Zhang1,2*, Tong Ma3*, Xiaoyu Tong3*, Yanjun Liu3, Peng Cui3, Xiaoqing Xu3, Jiemei Shi3, Wei Hu3, Wenhan Lu3, Zhenle Pei3, Minzhen Xu3, Xin Li1,2, Congjian Xu1,2 and **Yi Feng3**. Electroacupuncture improves metabolic and ovarian function in a rat model of polycystic ovary syndrome by decreasing white adipose tissue, increasing brown adipose tissue, and modulating the gut microbiota. Acupuncture in Medicine .2022. 1 – 13 DOI: 10.1177/09645284211056663

(8) Hongru Gao† , Xiaoyu Tong† , Wei Hu† , Yicong Wang, Kuinyu Lee, Xiaoqing Xu, Jiemei Shi, Zhenle Pei, Wenhan Lu, Yuning Chen, Ruonan Zhang, Zheyi Wang, Ziyu Wang, Chengzhi Han, Yu Wang and **Yi Feng***. Three-dimensional visualization of electroacupuncture-induced activation of brown adipose tissue via sympathetic innervation in PCOS rats. Chinese Medicine.2022 https://doi.org/10.1186/s13020-022-00603-w

(9) Wei Hu†, Junda Chen†, Caixia Sun†, Xiaoyu Tong, Wenhan Lu, Ziyong Ju, Yong Xia, Zhenle Pei1, Mingzhen Xu, Xiaoqing Xu, Jiemei Shi, Yi Li, Haofeng Chen, Yizhou Lu, Ying Ying, Hongru Gao, Aaron J.W. Hsueh, Fan Zhang, Zhi Lü,*, **Yi Feng*.** Spatial topological analysis of the sympathetic neurovascular characteristic of acupoints in the Ren meridian using advanced tissue-clearing and near infrared II imaging. Computational and Structural Biotechnology Journal. 2021. https://doi.org/10.1016/j.csbj.2021.04.010 8;19:2236-2245

(10) Xiaoyu Tong, Yanjun Liu，Xiaoqing Xu, Jiemei Shi, Wei Hu, Tong Ma, Peng Cui, Wenhan Lu, Zhenle Pei, Mingzhen Xu, Feifei Zhang, Xin Li, and **Yi Feng***. Ovarian Innervation Coupling With Vascularity: The Role of Electro-Acupuncture in Follicular Maturation in a Rat Model of Polycystic Ovary Syndrome. Front. Physiol., 29 May 2020 https://doi.org/10.3389/fphys.2020.00474

Awards & Honors

2023, Third Prize of the 9th National College Student Basic Medical Innovation Research and Experimental Design Forum

2021, First Prize of Scientific and Technological Progress Award of China acupuncture and moxibustion Society, acupuncture and moxibustion Science of China meeting

2020, Third Prize of the 6th National College Student Basic Medical Innovation Research and Experimental Design Forum

Third Prize in the 2020 Yangtze River Delta Urban Youth Entrepreneurship and Innovation Competition

First Prize in the 2020 Fudan University High Level Talent and Second Postdoctoral Entrepreneurship Competition

In 2017, Fudan University Shanghai Medical College awarded the "Outstanding Teacher Award"
Academic Achievements:
2022 the National Natural Science Foundation of China's general project "Panoramic Analysis of GnRH Neuron Networks in the Hypothalamus and Comparison of Central Mechanisms of Electro-acupuncture and Manual Acupuncture in the Treatment of PCOS"
2020 the National Natural Science Foundation of China's general project "Exploring the Neuro-vascular Coupling Mechanism of Acupuncture Stimulated Follicular Development through Multi-modal Molecular Imaging"
2020, Fudan University coronavirus Pneumonia Prevention and Control Research Project "Research on SARS CoV-2 Multiple Organ Infection Pathway and Mechanism"
2019 Shanghai Municipal Science and Technology Major Project "International Human Phenotypic Group Plan (Phase I)" Molecular Mechanisms and Tissue Phenotypes of Histone Carcinogenic Mutations in Pediatric Gliomas Based on Brain Models "
2017 the National Natural Science Foundation of China's general project "Research on the role of neovascularization in follicular development and acupuncture induced ovulation Using Whole Tissue Transparent Staining Combined with 3D Imaging Technology "

Instructor's Academic Background:

Yanqing Wang， Ph.D. Professor

Professor in Neurobiology and Integrative Medicine. She obtained her Ph.D. degree in Neurobiology from Fudan University in 2000. She was an assistant professor in National Laboratory of Medical Neurobiology, Shanghai Medical University (1995-2000), an STA fellow and Postdoctoral fellow in Research Institute of Chiba Cancer Center, Japan (2000-2002). She was an associate professor since 2003 in the Department of Integrative Medicine and Neurobiology in Shanghai Medical College of Fudan University. Granted by National Key Basic Research Program of China, National Natural Science Foundation, the Program for New Century Excellent Talents in University, her present research fields are: Mechanism study of bone cancer pain; Mechanism study of chronic inflammatory and neuropathic pain and electroacupuncture analgesia.

Members of Teaching Team

Name	Gender	Professional Title	Department	Responsibility
Yi Feng	Female	Professor	Department of Integrative Medicine and Neurobiology, School of Basic Medical Sciences, Shanghai Medical College, Fudan University	Organize and coordination, lectures, practical courses, and grading
Jin Yu	Female	Professor	Department of Integrative Medicine and Neurobiology, School of Basic Medical Sciences, Shanghai Medical College, Fudan University	Organize and coordination, lectures, practical courses, and grading
Jun Wang	Female	Associated Professor	Department of Integrative Medicine and Neurobiology, School of Basic Medical Sciences, Shanghai Medical College, Fudan University	lectures

Wenli Mi	Female	Associated Professor	Department of Integrative Medicine and Neurobiology, School of Basic Medical Sciences, Shanghai Medical College, Fudan University	lectures
Yuxia Chu	Female	Associated Professor	Department of Integrative Medicine and Neurobiology, School of Basic Medical Sciences, Shanghai Medical College, Fudan University	lectures
Qiliang Maying	Male	Associated Professor	Department of Integrative Medicine and Neurobiology, School of Basic Medical Sciences, Shanghai Medical College, Fudan University	Lectures, practice and visiting
Bei Li	Female	Associated Professor	Department of Integrative Medicine and Neurobiology, School of Basic Medical Sciences, Shanghai Medical College, Fudan University	Lectures, practice and visiting
Xiaoyu Tong	Female	Experimentalist	Department of Integrative Medicine and Neurobiology, School of Basic Medical Sciences, Shanghai Medical College, Fudan University	Lectures, practice and visiting

Course Schedule (Please supply the details about each lesson)**:**

Week 1	3 h	History, current situation and future of acupuncture and moxibustion 针灸的历史、现状与未来 Modern understanding of the basic theory of acupuncture and moxibustion (meridians and acupoints)针灸的基础理论（经络、穴位）的现代理解
	3 h	Clinical and fundamental aspects of acupuncture analgesia and acupuncture anesthesia 针刺镇痛、针刺麻醉的临床和基础
	3 h	Demonstration and Experience (1) - Demonstration/Operation of Traditional Chinese Medicine Treatment Methods such as Acupuncture and Moxibustion 示教和体验（一）—针灸等中医治疗手段示教/操作 Demonstration and Experiment (II) - Experimental Demonstration of Animal Acupuncture 示教和实验（二）—动物针刺的实验示教
Week 2	3 h	Treatment of female infertility with acupuncture and moxibustion 针灸治疗女性生殖障碍
	3 h	Acupuncture and moxibustion to lose weight 针灸减肥
	3 h	Visit to Shanghai Museum of Traditional Chinese Medicine 上海中医药博物馆参观 示教和实验（三）
Week 3	3 h	Acupuncture and moxibustion for diabetes, hypertension and heart disease 针灸治疗糖尿病、高血压、心脏病

		3 h	Acupuncture and moxibustion for depression, anxiety, insomnia and other mental disorders 针灸治疗抑郁症、焦虑证等精神疾患
		3 h	Acupuncture and moxibustion and moxibustion for insomnia 针灸治疗失眠
	Week 4	3 h	Acupuncture and moxibustion for ischemic stroke, sequelae and complications 针灸治疗缺血性卒中及后遗症、并发症
		3 h	Treatment of multiple sclerosis with acupuncture and moxibustion 针灸治疗多发性硬化
		3 h	Visit to Clinic 针灸临床参观　示教和实验（四）

The design of class discussion or exercise, practice, experience and so on:

1. During the course, visits and teaching will also be arranged for the Human Science Museum, Pathology Museum, and Shanghai Museum of Traditional Chinese Medicine.
2. Extract the key content of each lesson through in class assignments and form short answer questions for students to complete.
3. Clinical acupuncture and moxibustion therapy and experimental animal acupuncture and moxibustion technology.

If you need a TA, please indicate the assignment of assistant:

Yes. The TA will help with recording attendance, participation, organizing field trips.

Grading & Evaluation (Provide a final grade that reflects the formative evaluation process)**:**

Attendance 20 %
Experimental report(s) 30 %
Examination 50 %

Usage of Textbook: ☑Yes(complete textbook information form below) ☐No

Textbook Information (No more than two textbooks) **:**

Title	Author	ISBN	Publishing Time	Publisher	Type I	Type II
中西医结合基础概论	俞瑾、王彦青、冯异	校稿出版中		复旦大学出版社.	☑Self-compiled Textbook (Published) □Non-mainland Textbook □Other Textbook (Published)	□National Planning Textbook □Provincial and Ministerial Planning Textbook □School Level Planning Textbook □Others

Teaching References (Including author, title, publisher, publishing time,ISBN)**:**

1. Advanced Acupuncture Research: From Bench to Bedside (2022) ISBN 978-3-030-96220-3 ISBN 978-3-030-96221-0 (eBook) https://doi.org/10.1007/978-3-030-96221-0 Springer Nature Switzerland AG 2022

2. Current Research in Acupuncture (2013) ISBN 978-1-4614-3356-9 Springer Publication House

Table column size can be adjusted according to the content.