

Environmental Health: Air pollution and climate change

Department: Fudan International Summer Session 2025

Course Code							
Course Title	Environmental Health: Air pollution and climate change						
Credit	1	Experiment (including Computer) Credit	0	Practice Credit	3	Aesthetic Education Credit	0
Credit Hours Per Week	9(2 weeks)	Education on The Hard-Working Spirit Credit Hours	0	Language Instruction	En gli sh	Honors Course	<input type="checkbox"/> Yes <input type="checkbox"/> No
Course Type	<input type="checkbox"/> Core General Education Course <input type="checkbox"/> Specific General Education Course <input type="checkbox"/> Basic Course in General Discipline <input checked="" type="checkbox"/> Others			2+X Major : <input type="checkbox"/> Professional Core Course <input type="checkbox"/> Professional Advanced Course <hr/> Non 2+X Major : <input type="checkbox"/> Professional Compulsory Course <input type="checkbox"/> Professional Elective Course			
Course Objectives	(Including value, knowledge and ability objectives) <ul style="list-style-type: none"> ● To build up the knowledge map and frame on environment, climate change and health. ● To set up a thinking strategy to understand the relationship between environment and health, environmental epidemiology and environmental toxicology. ● To inspire students' deep interests and curiosity on our planetary health, not only human health, but animals, plants, microorganisms and even the viruses. We have 'One Health'! 						
Course Description	<p>Environment is of great significance to human health. Air pollution, both indoor and outdoor, is closely related with different health problems in different populations. Climate closely interacts with ambient air pollution and affects human health independently. Currently, global climate change has been observed and heat wave and cold wave has been reported to happen more frequently.</p> <p>This course will introduce the basic scientific knowledge about indoor and outdoor air pollution, as well as global and regional climate change, in relation to human health. The following questions will be talked and discussed: What types of air pollution are there in indoor and outdoor environment? What types of compounds form the pollution? Can they be measured? Do we know the levels of different pollutants? How about the relationship between outdoor and indoor environment? Is it safer to stay in indoor environment if there is a high outdoor air pollution? Do we have any measures to prevent or reduce the pollution level? What are the health effects of these pollutants? Do they affect our respiratory health, cardiovascular system or even our endocrine systems? How much does the climate change interact with air pollution and affect our health? How are about and international or national</p>						

	<p>fighting strategies on it?</p> <p>By active interactions with students, partly in person in class and partly in field or lab visit, students will benefit by obtaining scientific knowledge in air pollution, climate change and human health, getting more experienced in understanding the health effects of environment, becoming more skilled in communication in English and prepared better for international study in the future life.</p>					
<p>Course Requirements:</p> <p>This course will focus on introducing the updated knowledge on air pollution both indoor and outdoor environment, as well as climate change and air pollutant on human health. An experienced language skills in English is required. Enthusiasm in learning, exploring and active participation in group discussions will be encouraged.</p>						
<p>Teaching Methods:</p> <p>Teaching in person combined with one time in field work. Students' oral presentation in person combined with students' self-learning online.</p>						
<p>Course Director's Academic Background:</p> <p>Zhuohui Zhao, Ph.D (Uppsala University, Sweden), Professor, Department of Environmental Health, School of Public Health, Fudan University</p> <p>Academic interest: Air pollution, Climate Change and Health, Environment and children's health.</p>						
<p>Instructor's Academic Background:</p> <p>Zhuohui Zhao, Ph.D (Uppsala University, Sweden), Professor, Department of Environmental Health, School of Public Health, Fudan University</p> <p>Academic interest: Air pollution, Climate Change and Health, Environment and children's health.</p>						
<p>Members of Teaching Team</p>						
Name	Gender	Professional Title	Department	Responsibility		
Zhuohui Zhao	Female	Prof.	School of Public Health	Main responsibility		
<p>Course Schedule (Please supply the details about each lesson):</p>						
Week	Date (THU)	Time	Contents	Location /methods	Teacher	Updates
1	June. 30th	8:30-11:30	Overview of Air pollution, Climate change and Health	In person	Zhuohui Zhao	
2	July. 2th	8:30-11:30	Sources, Components of Air pollutants and health effects	In person	Zhuohui Zhao	
3	July. 4 th	8:30-11:30	Field visit in Jiangwan Campus, Fudan University	Practice (Field work)	Zhuohui Zhao	

	4	July. 7 th	8:30- 11:30	Methodology of Environmental epidemiology	In person	Zhuohui Zhao		
	5	July. 9 th	8:30- 11:30	Case study on environment and health	In person	Zhuohui Zhao		
	6	July. 11 th	8:30- 11:30	Presentation of proposals	In person	Zhuohui Zhao		
<p>The design of class discussion or exercise, practice, experience and so on: Discussion on certain topics will be organized in the class following the subjects. One visit will be arranged in the Jiangwan Campus, Fudan University, to visit the real-time air pollution and climatic monitoring site.</p>								
<p>If you need a TA, please indicate the assignment of assistant: We expect a TA could help organize and participate in the field visit.</p>								
<p>Grading & Evaluation (Provide a final grade that reflects the formative evaluation process): Twice of homework (50%)+ Final-term proposal presentation (50%)</p>								
<p>Usage of Textbook: <input type="checkbox"/> Yes(complete textbook information form below) <input checked="" type="checkbox"/> No</p>								
<p>Textbook Information (No more than two textbooks) :</p>								
Title	Author	ISBN	Publishing Time	Publisher	Type I	Type II		
					<input type="checkbox"/> Self-compiled Textbook (Published) <input checked="" type="checkbox"/> Non-mainland Textbook <input type="checkbox"/> Other Textbook (Published)	<input type="checkbox"/> National Planning Textbook <input type="checkbox"/> Provincial and Ministerial Planning Textbook <input type="checkbox"/> School Level Planning Textbook <input type="checkbox"/> Others		
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<p>Teaching References (Including author, title, publisher, publishing time,ISBN): No specified</p>								

Table column size can be adjusted according to the content.