



**Academic Year 2026-2027
Syllabus
Prevention and Promotion in Global Health
6 CFU
Professors Stefano Orlando, Fausto Ciccacci and Paolo Vineis**

Course Description

The course is divided into three modules:

1st Module, Title: Natural History and Global Burden of Diseases (Prof. F. Ciccacci), 1 CFU / 7 hours

2nd Module, Title: Global Health, Prevention and Promotion (Prof. S. Orlando), 3 CFU / 21 hours

3rd Module, Title: Environmental Epidemiology, Social Determinants and the Exposome (Prof. P. Vineis), 2 CFU / 14 hours

The course introduces students from different pre-university backgrounds to the main population-health challenges and to the foundations of global health, prevention and health promotion. Students will learn to interpret basic health indicators; distinguish communicable and non-communicable disease patterns; understand the economic, social and environmental determinants of health; and critically discuss how scientific evidence can inform sustainable and equitable public policies. The course also introduces environmental epidemiology and the exposome as frameworks for connecting lifetime social and environmental exposures with health outcomes. No prior medical training is required.

1st Module

Topic 1	Defining and measuring health: Definitions of health, population-health indicators and main demographic determinants. <i>Teaching hours: 1-2</i>
Topic 2	Natural history of acute and chronic diseases: Main differences between communicable and non-communicable diseases, including causes, trends and consequences. <i>Teaching hours: 3-4</i>
Topic 3	Causes and determinants of health: Causation, risk factors and health determinants, including lifestyles, education, inequalities and social isolation. <i>Teaching hours: 5-7</i>

2nd Module

Topic 4	Demographic and epidemiological transition: Challenges and opportunities associated with longer life expectancy, ageing, disability and migration. <i>Teaching hours: 1-3</i>
Topic 5	Global burden of disease: Changing patterns of communicable and non-communicable diseases; HIV/AIDS, tuberculosis, malaria and emerging epidemic threats; global and planetary-health perspectives. <i>Teaching hours: 4-7</i>
Topic 6	Health and economics: Why and how health is measured, including DALYs, QALYs and the Global Burden of Disease framework. <i>Teaching hours: 8-10</i>
Topic 7	Health promotion and protection: The impact of interventions and public policies on population health, using an interdisciplinary approach. <i>Teaching hours: 11-14</i>
Topic 8	Economic evaluation in health: Basic principles for comparing the costs, benefits and distributional effects of health interventions. <i>Teaching hours: 15-17</i>
Topic 9	Preparedness, governance and health in crises: The role of WHO and national and international institutions in epidemic preparedness and response; lessons from recent epidemics and pandemics; warfare and health, prevention and containment. <i>Teaching hours: 18-21</i>

3rd Module

Topic 10	Population thinking, risk and causality: What epidemiology studies; how populations, comparisons, bias, confounding and uncertainty shape claims about causes of disease. <i>Teaching hours: 1-2</i>
Topic 11	From environmental epidemiology to the exposome: How environmental epidemiology links exposures to health; the exposome as the totality of environmental, social and behavioural exposures across the life course. <i>Teaching hours: 3-4</i>
Topic 12	Social determinants and health inequalities: How education, income, work, housing, discrimination and social relations influence health and become biologically embedded over time. <i>Teaching hours: 5-6</i>
Topic 13	Measuring complex exposures: An accessible introduction to cohort studies, questionnaires, personal monitoring, satellite data, biomarkers and omics, with emphasis on interpretation rather than laboratory detail. <i>Teaching hours: 7-8</i>
Topic 14	Air pollution, climate change and non-communicable diseases: Case studies showing how physical environments, climate-related change and social vulnerability interact to shape population health. <i>Teaching hours: 9-10</i>
Topic 15	EXPOsOMICS and LIFEPAH: What large international research programmes can reveal about lifetime exposures, healthy ageing and the biological embodiment of social disadvantage. <i>Teaching hours: 11-12</i>
Topic 16	From evidence to prevention and policy: Risk assessment, prevention priorities, ethics, public communication and the use of uncertain scientific evidence in global-health governance. <i>Teaching hours: 13-14</i>

Teaching Method

Lectures will combine concise presentations with guided discussion of published papers, reports and short case studies. Strong emphasis will be placed on interaction between teachers and students, interpretation of evidence and application to public-policy questions. Technical concepts, including epidemiological measures, biomarkers and omics, will be introduced at a conceptual level and will not require a medical or laboratory background. Students are expected to attend all lectures. Students missing one or more lectures, within the maximum absence allowed by the programme, may be assigned a short essay based on readings recommended by the professors.

Lectures, seminars, exercises

Interactive exercises, quizzes and discussion of real-world examples will be used to consolidate the main definitions and concepts. A midterm assessment open to attending students will be scheduled at the beginning of the course. Short papers may also be assigned during the course.

Textbook and Materials

Required readings include handouts provided by the professors and selected materials from authoritative sources such as WHO, WHO Europe, the World Bank, OECD and peer-reviewed journals.

Main referral readings for attending students:

OECD (2025), *Health at a Glance 2025: OECD Indicators*, OECD Publishing, Paris.

<https://doi.org/10.1787/8f9e3f98-en>

World Health Organization (2026), *World health statistics 2026: monitoring health for the SDGs, sustainable development goals*. Geneva: WHO.

<https://www.who.int/publications/i/item/9789240122482>

Guinness L. and Wiseman V. (2011), *Introduction to Health Economics*, 2nd ed., Open University Press.

Vineis P. (2018), From John Snow to omics: the long journey of environmental epidemiology. *European Journal of Epidemiology*, 33, 355-363. <https://doi.org/10.1007/s10654-018-0398-4>

Vineis P. et al. (2020), What is new in the exposome? *Environment International*, 143, 105887. <https://doi.org/10.1016/j.envint.2020.105887>

Vineis P. et al. (2020), Special Report: The Biology of Inequalities in Health: The LIFEPAATH Consortium. *Frontiers in Public Health*, 8, 118. <https://doi.org/10.3389/fpubh.2020.00118>

Non-attending students manuals:

Routledge Handbook of Global Public Health, 1st Edition.

Guest C., Ricciardi W., *Oxford Handbook of Public Health Practice*.

Other readings are available on the website <https://economia.uniroma2.it/corso/materialidoc/1764/>

Assessment

A common final assessment covering all three modules is required (see below).

Additional learning activities

Textbook and Materials

Required readings for attending students: handouts from the professors; selected reports and web materials from WHO, WHO Europe, the World Bank and OECD; selected peer-reviewed readings for the Vineis module.

Non-attending students manual: Handbook of Health Promotion and Disease Prevention (The Springer Series in Behavioral Psychophysiology and Medicine)

Assessment

For attending students (more than 80% presence in class):

Final grade will be based on:

attendance to lectures, exercises evaluation and active participation at the course (20%)

Written assessment covering the three modules, with closed and open questions, or an oral examination (80%).

For non-attending students (less than 80% presence in class):

For non-attending students, the exam will consist of an oral discussion (evaluation) on the course's topics.

Office hours

Eventually after classes and on requested (email) appointment.

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Stefano Orlando: stefano.orlando@uniroma2.it

Appointments: <https://fantastical.app/steorlando-lyan/colloquio>

Paolo Vineis: p.vineis@imperial.ac.uk

NOTE: If you are an **Erasmus** or a **non-Global Governance** student who would like to attend one or more courses in the Global Governance programme, please be aware that, before enrolling in the course, you should have read the **code of conduct** and the procedural rules characterizing our programme. We assume that, if you enroll in the course, **you have read and accepted all Global Governance values and rules**. Notice that attendance is expected from the very first lesson and you need to attend at least 75% of the course to be considered an attending student.

Description of the methods and criteria for testing learning

The examination assesses the student's overall preparation, ability to integrate the knowledge of the different parts of the programme, consequentiality of reasoning, analytical ability and autonomy of judgement. In addition, language property and clarity of presentation are assessed, in accordance with the Dublin descriptors (1. knowledge and understanding; 2. applying knowledge and understanding; 3. making judgements; 4. learning skills; 5. communication skills).

The final grade will be related 70% to the degree of knowledge and 30% to the expressive capacity (written and oral) and autonomous critical judgement demonstrated by the student.

The examination will be graded according to the following criteria:

Unsuitable: important deficiencies and/or inaccuracies in the knowledge and understanding of the topics; limited capacity for analysis and synthesis, frequent generalisations and limited critical and judgement skills; the topics are exposed in an incoherent manner and with inappropriate language.

18-20: barely sufficient knowledge and understanding of the topics, with possible generalisations and imperfections; sufficient capacity for analysis, synthesis and autonomy of judgement; the topics are frequently exposed in an inconsistent manner and with inappropriate/technical language;

21-23: surface knowledge and understanding of the topics; ability to analyse and synthesise correctly with sufficiently coherent logical argumentation and appropriate/technical language.

24-26: fair knowledge and understanding of the topics; good analytical and synthetic skills with rigorously expressed arguments but not always appropriate/technical language.

27-29: complete knowledge and understanding of the topics; considerable capacity for analysis and synthesis. Good autonomy of judgement. Arguments presented in a rigorous manner and with appropriate/technical language.

30-30L: very good level of knowledge and thorough understanding of topics. Excellent analytical and synthetic skills and independent judgement. Arguments expressed in an original manner and in appropriate technical language.
