Syllabus Module 221

Module ≠ 221	**Social and behavioral sciences : Major Ageing,Chronic diseases & LT care**
UE coordinator	Dr Martine Bellanger, Professor of Economics, EHESP Martine.Bellanger@ehesp.fr
Dates	From January 21 to 25, 2019
Credits/ECTS	3 (1 ECTS = 25h student'swork)
Duration	Number of days: 5
Module description	This module is based on evidence that chronic diseases have become a major public health concern not only in high income countries, but also in low and middle ones. In the developed countries, chronic diseases are frequently seen in association with aging. Although we recognize that efforts have been made to tackle this problem in terms of medical and social care, improvement is still needed in terms of life-long prevention. This course focuses on social, organizational and behavioral approaches and methods in order to provide a good understanding of the public health issues involved. Intersectorial actions and policies implemented by national and sub-national policy makers and planners are analyzed and reviewed. A comprehensive and integrated approach in terms of the 'long term care model/chronic care models' forms the thread running through the course. Particular attention is given to interactions between various health and social professionals, between hospitals and nursing homes, as well as to interactions between informal resources and formal resources. Valuing informal resources through different economic methods will also be specific dimension of approaching long term care issues. Finally, a particular focus on worldwide breast cancer primary prevention will be given during the module, as a way to tackle with some chronic care conditions. Students will have the opportunity to study and assess a wide range of international policies and reforms and their impacts at different levels (e.g OECD & EU countries, and global level)
Prerequisites	Basic knowledge in economics and health & social policy
Course learning objectives	*Learning objectives: at the end of the module, the students should be able to:* • Identify organizational and behavioural approaches involved in primary public health prevention, especially for breast cancer • Discuss the role of different stakeholders in the planning and implementation of policies and programs tackling chronic and long term care issues worldwide, including a case on Latin America • Use advanced qualitative and quantitative methods to evaluate interventions related to people with chronic conditions such as Alzheimer disease and cancer • Identify and critique various data sources for Global Burden of Disease (GBD) using Disability Adjusted life year (DALY) or Potential years of life lost (PYLL) • Use 'long term care models' & 'chronic care models' to provide interventions based on cooperation between professionals, services and informal caregivers. • Conduct research that integrates models and appropriate methods for conducting practice in LT care and chronic settings • Contribute to effective public health programs in the domain of aging, LT and chronic diseases
UE Structure details of sessions title/spaeker/date/duration	Specific leaning objectives are noted for each session. At the end of each session, students should know and be able to accomplish the session's learning objectives. • Session 1. Common challenges for aging, LT care & chronic diseases & Global burden of disease, Martine Bellanger Jan 21, 3H • Session 2. Development of international programs for cancer prevention : the example of breast cancer, Sophie Lelievre, Jan 21, 3H • Session 3. Economic evaluation of LT Care: Methods & Applications, M Bellanger, Jan 22, 3H • Sessions 4. Elderly and Chronic diseases in Latin America: health systems strengthening, and key country strategies in primary, secondary and tertiary prevention, F Lavadenz Jan 22 3H • Session 5. The long road to primary prevention of cancers, S Lelievre, Jan 23, 4H30 • Session 6-7-9 . Economics of prevention and modelling of primary prevention, Janvier 23- 24 8H00

	• Session 8. Priority setting" in Cancer in El Salvador (Cervical cancer). F Lavadenz Jan 24 3H • Session 10. Calculation of the disease burden associated with environmental chemical exposure: Jan 25, 3H
Course requirement	Students are expected to attend all lectures. Beyond 4:00 pm, students are required to read some materials, practice cases and prepare their individual project.
Grading and assessment	Individual in class assignment and homework: 40% of the final grade & Final test 60% Details assignments:

≠	Assignment topic	%	Type
1	First assignment Tuesday 22 /01/2019	10%	Individual
2	Second Assignment 24 /01/2019	10%	Individual
3	Third Assignment 25/01/2019	20%	Individual
4	Final test on Feb 8 2019	60%	Individual

Location	EHESP-MSH Avenue George Sand, La Plaine St Denis Greater Paris
Readings	**Articles (on electronic reserve):** Articles available on REAL website OECD 2011– Health Reforms: Meeting the challenge of ageing and multiple morbidities. OECD Publishing.http://dx.doi.org/10.1787/9789264122314-e Haidong Wang*, Laura Dwyer-Lindgren, Katherine T Lofgren, Julie Knoll Rajaratnam, Jacob R Marcus, Alison Levin-Rector, Carly E Levitz, Alan D Lopez, Christopher J L Murray, Age-specifi c and sex-specifi c mortality in 187 countries, 1970–2010: a systematic analysis for the Global Burden of Disease Study 2010, The *Lancet* 2012 WHO 2005, Preventing CHRONIC DISEASES a vital investment. Report Murray CGL et al Global, regional, and national incidence and mortality for HIV, tuberculosis, and malaria during 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013, The Lancet, July 2014 Website http://www.who.int/healthinfo/global_burden_disease/estimates_regional/en/index1.htm http://globocan.iarc.fr/ http://www.afro.who.int/ http://www.healthdata.org/ Institute for Health Metrics http://www.healthdata.org/research-article/global-regional-and-national-incidence-and-mortality-hiv-tuberculosis-and-malaria Additional articles will also be provided in class
Course policy	**Attendance & punctuality** **Regular and punctual class attendance is a prerequisite for receiving credit in a course.** Students are expected to attend each class. Attendance will be taken at each class. The obligations of attendance and punctuality cover every aspect of the course: - lectures, conferences, group projects, assessments, examinations, as described in EHESP Academic Regulations http://mph.ehesp.fr EHESP Academic Regulation Article. 3). If students are not able to make it to class, they are required to send an email to the instructor and to the MPH program coordinating team explaining their absence prior to the scheduled class date. All supporting documents are provided to the end-of-year panel. . Students who miss class are responsible for content. Any student who misses a class has the responsibility for obtaining copies of notes, handouts and assignments. If additional assistance is still

necessary, an appointment should be scheduled with the instructor. Class time is not to be used to go over material with students who have missed class.

Lateness: Students who are more than 10 minutes late may be denied access to a class. Repeated late arrivals may be counted as absences (See http://mph.ehesp.fr EHESP Academic Regulation Article. 3 Attendance & Punctuality)

Maximum absences authorized & penalty otherwise
Above 20% of absences will be designated a fail for a given class. The students will be entitled to be reassessed in any failed component(s). If they undertake a reassessment or they retake a module this means that they cannot normally obtain more than the minimum pass mark (i.e. 10 out of 20)

Exceptional circumstances
Absence from any examination or test, or late submission of assignments due to illness, psychological problems, or exceptional personal reasons must be justified; otherwise, students will be penalized, as above mentioned. Students must directly notify their professor or the MPH academic secretariat before the exam or before the assignment deadline. Before accepting the student's justification, the professor or the MPH academic secretariat has the right to request either a certificate from the attending physician or from a psychologist, or from any other relevant person (See http://mph.ehesp.fr EHESP Academic Regulation Article 4 Examinations).

Courtesy: All cell phones/pages MUST be turned off during class time.
Students are required to conduct themselves according to professional standards, eating during class time is not permitted during class time, such as course or group work.

Valuing diversity	Diversity enriches learning. It requires an atmosphere of inclusion and tolerance, which oftentimes challenges our own closely-held ideas, as well as our personal comfort zones. The results, however, create a sense of community and promote excellence in the learning environment. This class will follow principles of inclusion, respect, tolerance, and acceptance that support the values of diversity. Diversity includes consideration of: (1) life experiences, including type, variety, uniqueness, duration, personal values, political viewpoints, and intensity; and (2) factors related to "diversity of presence," including, among others, age, economic circumstances, ethnic identification, family educational attainment, disability, gender, geographic origin, maturity, race, religion, sexual orientation and social position.
Course evaluation	EHESP requests that you complete a course evaluation at the end of the school year. Your responses will be anonymous, with feedback provided in the aggregate. Open-ended comments will be shared with instructors, but not identified with individual students. Your participation in course evaluation is an expectation, since providing constructive feedback is a professional obligation. Feedback is critical, moreover, to improving the quality of our courses, as well as for instructor assessment.

Session 1	Common challenges for aging, LT care & chronic diseases & Global burden of disease estimation
Speakers	Dr. Martine M Bellanger Professor, Head of the MPH Programs, EHESP martine.bellanger@ehesp.fr
Session Outlines	• Health and economic effects of aging and of chronic diseases and implications in terms of care • Statistics: Worldwide statistics and per income level type of countries • Global Burden of Diseases (GDD), concept and definition • Estimation of Burden of diseases : Global Health Estimates GHE 2013 • Analysis of trends 2000-2011
Learning Objectives	At the end of the session, students will be able to: - Identify the critical factors associated with health effects of aging and chronic conditions - Analyze economic impacts of health effects on individuals and society - Use different databases and estimates such as DALYs, Potential years of life lost (PYLL) - Critically assess the measures used and the consequences in different countries studied
Duration	3 hours
Training methods	Lecture In class applications,
Reading	Eikemo TA & Mackenbash JP, GBD EuropeThe potential for reduction of health inequalities in Europe, Report for EU Project 2014 Murray CGL et al Global, regional, and national incidence and mortality for HIV, tuberculosis, and malaria during 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013, The Lancet, July 2014 Additional reading will be made available on REAL online course platform.
Validation	An individual assignment will be given during this first session. Students will have to review published literature, use available data on a topic related to aging, chronic conditions, prevention and LT care based upon different approaches proposed along with all sessions. A While students are encouraged to work cooperatively in the completion of assigned tasks, all reports should reflect individual efforts.

Session 2	Development of international programs for cancer prevention the example of breast cancer
Speakers	Sophie A. Lelièvre, DVM, LLM (Public Health), PhD Department of Basic Medical Sciences Associate Director, Collaborative Science Purdue Center for Cancer Research, IN, US lelievre@purdue.edu
Session Outline	• Introduction: What is cancer? cancer as a specific chronic disease • Cancer prevention & international efforts to foster early detection of Breast Cancer (BC) • Early detection of BC, and screening • Issues around BC screening, in the US, France and Ghana • Applications of cancer prevention
Learning Objectives	At the end of the session, students will be able to: • Describe international cancer prevention perspectives

	• Identify challenges in breast cancer management • Define different types of prevention • Demonstrate the worldwide impacts of breast cancer in terms of health outcomes & economic value
Duration	3 hours
Training methods	Lecture In class applications, case vignette Mamography screening for breast cancer
Reading	NEngl J Med 2012;367:e31 November 22, 2012 DOI:10.1056/NEJMclde1212888 Carrie N. Klabunde, Ph.D, Rachel Ballard-Barbash, M.D., M.P.H., and for the International Breast Cancer Screening Network Population-Based Screening Mammography Programs Internationally, *Semin Breast Dis.* 2007 June ; 10(2): 102–107. Additional reading will be made available on REAL online course platform
Validation	Validation is included in both the overall session assignment and the final written exam planned on Feb 8 2019

Session 3	Economic evaluation of LT Care: Methods
Speakers	Dr. Martine M Bellanger Professor, Head of the MPH Programs, EHESP martine.bellanger@ehesp.fr
Session Outlines	• Evaluation of long term care : context & perspectives • Dementia Facts and Figures and resources used for patients with dementia • Market versus non market provision of care • Societal perspective to estimate LT care resource used • Issues when valuing long term care • Methods for giving monetary value to informal care
Learning Objectives	At the end of the session, students will be able to: • Identify key economic & public issues related to caring people with chronic conditions, such as dementia in a long term. • Analyze theoretical approaches to value informal care • Use different methods to estimate long term care resources • Compare and evaluate the different methods used and their consequences in terms of policies
Duration	3 hours
Training methods	Lecture In class applications,
Reading	Marc A. Koopmanschap, Job N.A. van Exel,Bernard van den Berg3 and Werner B.F. Brouwer An Overview of Methods and Applications to Value Informal Care in Economic Evaluations of Healthcare (2008) Pharmacoeconomics 2008; 26 (4): 269-280 Gerves C, Bellanger M, Ankri J (2013) Economic Analysis of the Intangible Impacts of Informal Care for People with Alzheimer's Disease and Other Mental Disorders, Value in health 16: 745 – 754 Additional reading will be made available on REAL online course platform
Validation	Validation is included in both the overall session assignment and the final written exam planned on Feb8 2019

Sessions 4	**Elderly and Chronic diseases in Latin America: health systems strengthening, and key country strategies in primary, secondary and tertiary prevention**
Speakers	Dr. Fernando Lavandez Senior Health Policy Analyst, World Bank, Washington DC
Session Outlines	• Demographic transition in Latin American countries • Aging in LAC and Support for the Elderly and poverty in the life cycle • Elderly burden of disease worlwide
Learning Objectives	At the end of the session, students will be able to: • Identify different LT care policies towards the elderly LAC. • Analyze LT care funding systems and recent reforms in LAC
Duration	6 hours
Training methods	Lecture In class application: Study case
Reading	http://www.healthdata.org/policy-report/global-burden-disease-generating-evidence-guiding-policy-%E2%80%93-latin-america-and-caribbean The Global Burden of Disease: Generating Evidence, Guiding Policy – Latin America and Caribbean Regional Edition, 2013
Validation	Validation is included in both the overall session assignment and the final written exam planned on Feb 8 2019

Session 5	**The long road to primary prevention of cancers**
Speakers	Sophie A. Lelièvre, DVM, LLM (Public Health), PhD Department of Basic Medical Sciences Associate Director, Collaborative Science Purdue Center for Cancer Research, IN, US lelievre@purdue.edu
Session Outline	• Context for developing primary prevention of cancer • The example of the pan American health organization (PAHO) for cancer prevention, what about elsewhere? • Prevention strategies: based on the causes for specific types of cancers • Genes & Cancer • Epigenetics and primary breast cancer prevention
Learning Objectives	At the end of the session, students will be able to: • Describe approaches supporting integrative primary cancer prevention • Demonstrate the role of behavioral factors, environmental factors to be included in prevention • Recommend appropriate integrative services and interventions associated with primary prevention • Translate integrative research on prevention into actionable wellness plans
Duration	5 hours
Training methods	Lecture Exercise: implementing a cancer prevention program based on healthy diet and exercise. The importance of Public Value

Reading	Anthony Maher A & Sridhar D. Political priority in the global fight against non–communicable diseases, Journal of health global, December 2012 • Vol. 2 No. 2 • 020403 www.jogh.org doi: 10.7189/jogh.02.0204031
	Banerjee A.Tracking global funding for the prevention and control of non-communicable diseases. Bull World Health Organ 2012;90:479–479A|doi:10.2471/BLT.12.108795
	Website
	http://www.purdue.edu/discoverypark/ibcn/
	Additional papers will be provided on site
Validation	Validation is included in both the overall session assignment and the final written exam planned on Feb 9 2019

Session 6-7-9	**Economics of prevention and Modelling economic indicator and prevention strategies & Breast cancer**
Speakers	Dr. Martine M Bellanger
	Professor, Head of the MPH Programs, EHESP
	martine.bellanger@ehesp.fr
Session Outlines	• Economics of prevention : some reminders
	• Cost – Effectiveness of Prevention
	• Data analysis & Interpretation of findings
	• Discussion
Learning Objectives	At the end of the session, students will be able to:
	• Apply different methods to estimate prevention strategies , and especially for Breast Cancer
	• Discuss strengths and drawbacks of the methods us
	• Explore potential applications to other chronic conditions
Duration	8 hours
Training methods	In class applications
Reading	Denny L, de Sanjose S, Mutebi M, et al. Interventions to close the divide for women with breast and cervical cancer between low-income and middle-income countries and high-income countries. *Lancet (London, England)* 2017; **389**(10071): 861-70.
	Bray F, Jemal A, Torre LA, Forman D, Vineis P. Long-term Realism and Cost-effectiveness: Primary Prevention in Combatting Cancer and Associated Inequalities Worldwide. *Journal of the National Cancer Institute* 2015; **107**(12): djv273
Validation	Validation in the assignment for this session and in the final written exam planned on Feb 8 2019

Session 8	**"Priority setting" in Cancer in El Salvador (Cervical cancer).**
Speakers	Dr. Fernando Lavandez
	Senior Health Policy Analyst, World Bank, Washington DC
Session Outlines	• NCDs in LAC and health system responses: priority setting
	• Health Financing strategies for cervical cancers in LAC : the case of Salvador

Learning Objectives	At the end of the session, students will be able to: • Demonstrate the strengths and drawbacks of different systems & policy prevention in LAC • Assess the impacts of public policies for preventing cervical cancer in Salvador
Duration	3 hours
Training methods	Lecture, case study and in class discussion
Reading	Additional reading will be made available on REAL online course platform
Validation	Validation is included in both the overall session assignment and the final written exam planned Feb 9 2019

Session 10	Calculation of the disease burden associated with environmental chemical exposure: Application of toxicological information in health
Speakers	Dr. Martine M Bellanger Professor, Head of the MPH Programs, EHESP martine.bellanger@ehesp.fr
Session Outlines	• From Dose Response to Population Fraction Attributable • Cost estimates • Burden of Disease • Global estimates
Learning Objectives	At the end of the session, students will be able to: • Demonstrate how integrate care toxicological, epidemiological and economic approaches • Describe the burden of disease for main chronic conditions • Assess critically different papers retrieved from the literature • Identify lessons learnt estimation of burden of diseases at the global level
Duration	3 hours
Training methods	Lecture In class applications
Reading	Prüss-Ustün A, Wolf AJ, Corvalán C, Neville T, Bos R, Neira M Diseases due to unhealthy environments: an updated estimate of the global burden of disease attributable to environmental determinants of health, Journal of Public Health|pp1-12|doi10.1093/pubmed/fdw085 Grandjean P, Bellanger M Calculation of the disease burden associated with environmental chemical exposures: application of toxicological information in health economic estimationEnviron Health. 2017 Dec 5;16(1):123. doi: 10.1186/s12940-017-0340-3.
Validation	Validation is included in both the overall session assignment and the final written exam planned on Feb 9 2019