Short description of Modules MPH Year 2 for 2018-2019
ADVANCED CORES MODULES

Module ≠	Module title	Coordinator	Contents	ECTS #	Period Week/year
202	**Advanced Core curriculum – Social and behavioural sciences in public health (SBSPH)**	**Aymery CONSTANT**	**Social and behavioral sciences in public health (SBSPH): Module 202** The social and behavioral sciences in public health address the behavioral, social and cultural factors related to individual and population health and health disparities over the life course. Research and practice in this area contribute to the development, administration and evaluation of programs and policies in public health and health services to promote and sustain healthy environments as well as healthy lives for individuals and populations. ***Learning objectives****: at the end of the module, the students should be able to:* &. Identify basic concepts, processes and factors from a range of social and behavioral disciplines that are critical for development and improvement of public health interventions. 2. Identify the causes and nature of key ecological, social and behavioral factors that affect health of individuals and populations. 3. Describe steps and procedures for the design, implementation and evaluation of public health programs, policies and interventions to improve individuals and populations' health. 4. Apply evidence-based approach for the design and evaluation of public health programs, policies and interventions to improve health of individuals and populations.)emonstrate a working capacity to collaborate respectfully, equitably and regularly with colleagues from other cultures and disciplines to address complex health challenges.	**3**	**36-40, 2018 (Mondays)**
203	**Advanced Core curriculum – Epidemiology (EPI)**	**Judith MUELLER**	**Epidemiology (EPI): Module 203** This module aims at providing students with working knowledge of epidemiology, which will allow them applying epidemiological concepts in a general public health work setting. This includes understanding epidemiological measures, study designs, biases and study validity, diagnostic testing as it relates to screening and use of epidemiological data in decision making and simple models for prediction and evaluation of intervention strategies (decision analysis). The module also aims at consolidating pre-existing knowledge to prepare students for the epidemiology track. ***Learning objectives****: at the end of the module, the students should be able to:* 1. Explain and apply principal concepts of epidemiological reasoning (validity, causality, power, attributable risk…) 2. Interpret and discuss epidemiological studies, their design and their contribution to public health 3. Perform simple epidemiological analyses (measures of frequency and association; standardization and Mantel-Haenszel; test performance; combining probabilities) **Prerequisites** Introduction to epidemiology (M1 level)	**3**	**36-40, 2018 (Tuesdays)**
204	**Advanced Core curriculum – Information sciences and biostatistics (ISB)**	**Pascal Crépey**	**Information sciences and biostatistics (ISB) Module 204** This course is complementary with the M1 biostatistic module. Then, at the end of the present core curriculum, students will have an overview of basic methodological approaches and their application to public health issues. ***Learning objectives****: at the end of the module, the students should be able to:*	**3**	**36-40, 2018 (Wednesdays)**

			1. Discuss the role of epidemiology within the broader field of public health 2. Discuss the principles of disease prevention within populations 3. List and describe key terms used in the epidemiology and prevention of infectious disease 4. Calculate and interpret basic population measures of health and disease occurrence including incidence and prevalence 5. Make appropriate comparisons of disease rates within and between populations 6. Distinguish between basic measures of association, including rate ratio, risk ratio, incidence density ratio, odds ratio, attributable risk, and population attributable risk 7. Select and apply fundamental epidemiologic study designs including randomized clinical trial, cohort, case-control, and ecologic for the purpose of investigating public health problems 8. Identify the role of bias and confounding in epidemiologic research and apply methods appropriate to assessment of confounding and various types of bias 9. Differentiate between various epidemiologic study designs and compare their respective strengths and weaknesses Critique published epidemiological studies and identify their strengths and weaknesses ***Prerequisite***: MPH 1 Biostatistics Module		
205	**Advanced Core curriculum – Management and health policy (MHPS)**	**Odessa Dariel**	**Management and health policy sciences (MHPS) Module 205** (*content in progress)* The module builds upon basic understanding of health care systems and policies and introduces the students to more advanced concepts with key relevance to current issues in health policy worldwide. A focus will be on the development of policy and how it is affected by stakeholders and external forces. The module is intended to provide the students with the basic skills to assess policy options and make recommendations to clients and policy makers ***Learning objectives****: at the end of the module, the students should be able to:* 1. Describe, analyze and compare key processes and concepts in health policy 2. Identify relationships between stakeholders 3. Challenge the *status quo* and propose policy options	**3**	**36-40, 2018 (Fridays)**
206	**Advanced Core curriculum – Environmental and occupational health sciences (EOHS)**	**Aurore Gely-Pernot**	**Environmental and occupational health sciences (EOHS) Module 206** The EOHS program aims to train practitioners to identify risks run by the general population, consumers or workers exposed to nuisances and hazardous agents, and to propose measures designed to abate exposures and health impacts. It comprises a broad range of disciplines and viewpoints (from individual vulnerability factors to public policies) in order to stimulate the students' capacity to develop a consistent and cross-cutting problem-solving approach. In this context, this introductory module to the second year of the Master focuses on principles of health security. Expertise and management of "early signals", environmental health surveillance and the risk abatement tools will be investigated. This module aims to introduce the notion of risk assessment as well (to go further: module: Impact Assessment Approaches in Environmental Health) and to consolidate notion of toxicology (to go further: Critical windows of exposures and vulnerability). Finally, this module presents epidemiological methods developed for the investigation of health problems resulting from air pollution in outdoor or occupational settings. A group assignment whereby students will prepare and expose critical analyses of a set of papers from the scientific literature in a variety of domains will force them to draw from these different disciplinary areas in an integrative way. Each of these parts is presented in syllabus appendices. ***Learning objectives:*** *at the end of the module, the students should be able to:* 1. Apply analysis skills and techniques to assess and understand an environmental or occupational health problem 2. Discuss the basic biological concepts that allow to evaluate the exposure-response relationships 3. Describe the principles of exposure and risk assessment for nuisances and hazards related to the environment or to occupational settings	**3**	**36-40, 2018 (Thursdays)**