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| **Course title** | **Code** | **Semester** | **Type of course** | **Course volume (Contact hours)** | **ECTS** |
| **Epidemiology and Preventive Medicine** | **MED**  **3009** | **V** | **Mandatory** | **31** | **2** |
| **Faculty, the educational program and level of education** | * School of Medicine and Health Sciences * Higher Medical Educational Program “Medicine” * One cycle 6-year | | | | |

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| **Learning Course Content** |
| * Basic epidemiologic concepts and principles * Distribution of disease by Time, Place, and Person. * Epidemiologic data measurements (Incidence, Prevalence, population at risk, cumulative incidence, crude incidence and mortality rates, age-specific and mortality rates, standardized incidence and mortality rates, standardized incidence and mortality ratios, the proportional mortality ratio (PMR), the case-fatality ratio (CER), survival rate and relative survival rate, measuring the burden of disease. * Descriptive epidemiology (Who, What, Where and When?). * Case reports and case series * Prevalence surveys * Routine data collections * Mortality data * Morbidity data * Sources of summery data * Confidentiality. * Observational studies (ecological studies, cross-sectional studies, cohort studies, case-control studies) * Interventional studies (randomized controlled trials). * Systematic review * Study inclusion, appraisal and data abstraction * Meta analysis * Ratio measures (relative risk) * Rate ratios * Risk ratios * Prevalence ratios * Chance * Odds ratios; Causal inference * Measuring impact on health (Attributable Risk, Attributable Fraction, Population-Attributable Risk, Population-Attributable Fraction) * Validity and Precision * Bias and Confounding * Control of confounding (randomization, restriction, matching, stratification, standardization, modeling). * Outbreaks, epidemics, endemics and clusters. * Transmission (direct transmission, indirect transmission, airborne transmission). * Epidemic prevention; Types of surveillance (passive surveillance, active surveillance, sentinel surveillance). * Surveillance in practice. * Introduction to preventive medicine * Methods of primary prevention: Health promotion * Principles and practice of secondary prevention * Methods of tertiary prevention; Disease prevention in public health * Strategies for prevention * Prevention in practice. * Prevention of Chronic Diseases * Condition-specific prevention (obesity, type 2 Diabetes Mellitus, Stroke, Cardiovascular disease, Chronic lung disease, Cancer, Oral Health, Dementia, Chronic Pain and Arthritis). * Barriers (personal barriers and public barriers) and opportunities (opportunities for chronic disease prevention). * Prevention of infectious diseases * Overview of infectious disease (burden of disease, obtaining accurate history). * Public health priorities (HIV/AIDS, Tuberculosis, and Malaria), diseases transmitted by close contact, Foodborne and Waterborne infections, Vector-borne diseases and Zoonoses. * Emerging threats (Antimicrobial Resistance and HealthCare–Associated (Nosocomial) Infections, Emerging Infectious Diseases and Bioweapons). * Mental and Behavioral Health * Mental health/behavioral disorders and suicide (definition, epidemiology, costs). * Risks and protective factors (Biologic Risk Factors, Psychological Risk Factors, Social Risk Factors, Environmental Risk Factors, Culture/Diversity, Protective Factors). * Prevention and health promotion strategies (Theoretical Framework, Public Policy, Media Campaigns, Screening, Psycho-social Interventions, Medical/Pharmacologic Interventions * Assessing the validity and reliability of diagnostic and screening tests (sensitivity, specificity, positive and negative predictive values). |
| **Textbooks and Materials** |
| * A systematic review of key issues in public health -stefania Boccia;Paolo Villari; Springer; 2015 * Clinical Epidemiology : The Essentials- Fletcher, Robert H., Fletcher, Suzanne W.Fletcher, Grant S; Wolter kluwers; 5th.ed. 2014; e-book; * Epidemiology Biostatistics and Public Health – OJS; 2013; e-book; * High-Yield: Biostatistics, Epidemiology, & Public Health-Anthony N. Glaser; Wolter Kluwer; 4th.ed. 2014; |