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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).
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| **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;
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