Title		Mode	Instructor	Duration (Hr)	Learning outcomes:At the end of the session, students should be able to
EPIDEMIOLOGY					
Introduction to epidemiology	1.1	L	JAR	1	1. Define epidemiology 2. Describe the history of epidemiology 3. Discuss on the use of epidemiology
Islam & preventive medicine	1.2	L	JAR	1	1. Discuss on the concept of health and disease in Islamic perspective 2. Discuss on the akhlaq of Muslim individual and community towards preventing diseases 3. Discuss on Islamic approach in handling health problems in population.
Health determinants	1.3	L	SSL	1	1. Describe the multiple factors that contribute health problems 2. discuss the way of causal factors interact each other 3. discuss on how the intervention on these factors can fascilitate health improvements
Concept of health and disease	1.4	L	SSL	1	1. Define health, disease and epidemiological triad 2. Describe the dimension and changing concepts of health 3. Discuss about natural history of a disease
Measuring health & disease 1	1.5	L	SSL	2	1. Define the basic measurements in epidemiology 2. Define and able to use appropriately tools of epidemiologic measures: rate, ratio and proportion 3. calculate and interprete measures of morbidity: incidence and prevalence.
Measuring health & disease 2	1.6	L	SSL	2	1. Calculate and interprete measures of mortality: crude mortality rate, case-fatality rate, proportionate mortality. 2. Compare mortality in different popupation by using adjusted death rate: Direct and Indirect method of standardization 3. Interprete Years Potential Life Lost, Disability Adjusted Life-Years
Dynamic of disease transmission	1.7	L	SSL	2	1. Define source and reservoir of infection 2. Describe the chain of infection 3. Discuss the various spectrum of disease
Disease prevention & control	1.8	L	SSL	2	1. Define and discuss the levels of health prevention. 2. Define and discuss the approach of control startergies in public health 3. Discuss the approach of community prevention (public health programme).
Errors in epidemiology	1.9	L	NS	2	1.Define and describe the differences of random and systematic errors. 2.Describe the types of systematic errors such as confounding, information and selection bias. 3. Suggest the effort to be intergrated in research to reduce systematic errors.
Causation in epidemiology	1.1	L	NS	2	1. Define and characterize association and causal relationship in epidemiology 2. Describe the guidelines in establishing causality 3. Discuss the conditions and difficulties involve in establishing causality.
Epidemiology of communicable disease	1.11	L	NS	2	1. Define communicable disease, the triad and cycle 2. Discuss the trend of important communicable disease. 3. Explain the principles of communicable disease control
Epidemiology of non-communicable disease	1.12	L	NS	2	1. Define non-communicable disease 2. Discuss the trend of important non-communicable disease. 3. Explain the principles of non-communicable disease control
Practical 2	1.13	P	SSL	3X3	1. calculate the incidence rate 2. compute the prevalence rate 3. estimate the point prevalence rate and period prevalence rate
Practical 2	1.14	P	NS	3X3	1. Associate the outcome/disease/risk factors and exposure/risk factor variables. 2. Construct and describe schematic design of different types of study design based on the given outcome/disease and exposure/risk factor. 3. Discuss the strength and weakness of each of the study design.
ENVIRONMENTAL HEALTH					
Principles of environmental Health	2.1	L	NS	2	1. Define environmental health 2. Discuss the the different types of environmental pollution 3. Discuss the principles of environmental preventive and control measures

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OCCUPATIONAL HEALTH					
Introduction to Occupational Health	3.1	L	RMR	2	1. Define occupational health 2. Discuss the importance of occupational health 3. Discuss the types of occupational hazards
Nutrition					
Principles of human nutrition	5.1		HAS	1	1. Describe the types of nutrient in the food 2. Describe on the food pyramid 3. Describe the Malaysia dietary guideline
Nutritional related diseases	5.2		HAS	1	1. Describe the micronutrient deficiency, symptoms and preventive measures 2. Describe the macronutrient deficiency, symptoms and preventive measures
Nutritional health assessment	5.3		HAS	1	1. Describe on the types of nutritional assessment: anthropometric measurement, clinical assessment, biomarkers and dietary assessment. 2. Discuss on the pro and cons of the different types of nutritional assessment
Practical			HAS	3	how to do the nutritional assessment, particularly the anthropometric methods, clinical methods, and dietary evaluation methods.
BIOSTATISTIC					
Introduction of Biostatistics	6.1	L	HTIKE	1	1. Define Statistics and Biostatistics 2. Determine and differentiate type of data 3. Find out the source of data 4. Describe, discuss and compare the difference level of measurements
Descriptive Statistics I (Categorical data)	6.2	L	HTIKE	2	1. Describe, discuss and present the results in a proper table or figures for categorical data
Descriptive Statistics II (Numerical data)	6.3	L	HTIKE	2	1. Describe, discuss and present the results in a proper table or figures for numerical data
Hypothesis testing & statistical inference	6.4	L	HTIKE	2	1. Describe types of probability distribution 2. Describe normal distribution 3. Define the hypothesis testing 4. Define level of significant and p-value 5. Differentiate the different between type I error and type II error 6. Define confidence internval and interpret it
Categorical data analysis and Interpretation	6.5	L	HTIKE	1	1. Define the chi-square test 2. Descibe the type of data appropriate for chi-square test 3. Determine application of Fisher's exact test and Yates' continuity correction 4. Descibe, discuss and report chi square test results
Numerical data analysis and Interpretation	6.6	L	HTIKE	3	1. Descibe, discuss and report student-t test results 2. Descibe, discuss and report paired t test results 3. Descibe, discuss and report F test results (ANOVA) 4. Descibe, discuss and report correlation test results 5. Descibe, discuss and report regression test results
Non parametric tests	6.7	L	HTIKE	1	1. Define non-parametric test 2. Determine the type of data for the appropriate non-parametric test 3. Compare the analog of non parametric tests with parametric tests 4. Descibe, discuss and report non parametric results
Practical 1	6.8	P	HTIKE	3X3	1. Describe, discuss and present the results for categorical and numerical data
Practical 2	6.9	P	HTIKE	3X3	1. Descibe, discuss and report student-t test results 2. Descibe, discuss and report paired t test results 3. Descibe, discuss and report F test results (ANOVA) 4. Descibe, discuss and report correlation test results 5. Descibe, discuss and report chi square test results

Title		Mode	Instructor	Duration (Hr)	Learning outcomes:At the end of the session, students should be able to
DEMOGRAPHY					
Principles of demography	7.1	L	JAR	1	1. Discuss on the history of population cencus 2. Explain the vital statistics: source and types of vital statistics 3. Use the demographic data in describing population health status and health management
Population pyramid	7.2	L	JAR	1	1. Define and describe the different types of population pyramid 2. Discuss on the methodology of population projection and estimates 3. Describe demographic transmission
Life tables	7.3	L	JAR	1	1. Define life tables 2. Construct life tables by age, sex, race/ ethnic group. 3. describe the applications in health planning, insurance medicine and actuarial science
Practical	7.4	P	JAR	3X3	1. Measure and describe birth, death & fertility for the given data 2. Construct, describe and compare population pyramid 3. Discuss demographic transition based on given data
RESEARCH METHODOLOGY					
Introduction to research (identifying & prioritising research topic)	8.1	L	HAS	1	1. Define research and describe the reasons and importance of conducting researches 2. Identify and prioritising research topics 3. Form research teams and apply the concept of dynamic managing research team
Literature review & management	8.2	L	HAS	1	1. Describe the purpose of conductiong literarture search 2. Conduct, manage and construct the literature review 3. Identify important and relevant variables for the research 4. Describe and summarise relationship of the outcome and explanatory variables of the research and present in the form of conceptual framework
Research designs	8.3	L	HAS	2	1. Define descriptive epidemiology and analytical epidemiology 2. Describe main elements of descriptive epidemiology 3. Discuss relevant scientific & administrative uses.
Sampling and sample size	8.4		JAR	1	1. Describe type of sampling techniques 2. Describe the importance of sample size calculation 3. Calculation sample size for one and two samples proportion & means
Planning for data collection	8.4	L	HAS	1	1. indentify the variables used in the research 2. Describe the levels of measurement 3. Choose the best method to collect data (including sampling technique)
Validity & reliability in research	8.5	L	HAS	1	1. Define validity and reliability 2. Validate the research instruments 3. identify and control potential bias and confounders in the research
Planning for statistical analysis	8.6	L	HAS	1	1. describe the dependent and independent variables 2. construct dummy tables 3. construct univariate analyses and interprete the results
Presenting & writing research findings	8.7	L	HAS	1	1. Discuss the results appropriately 2. Write a scientific report according to the format 3. Present the research findings
Mini research	8.8	P	All lecturers	43	
Presentation	8.9	P	All lecturers	4	