

VIRTUAL MOBILITY - LIST OF SUBJECTS OFFERED IN SEMESTER I 2021/2022 FKAAB UTHM (October 2021 - February 2022)

Bachelor of Civil Engineering with Honours

COURSE CODE	COURSE NAME	SYPNOSIS	COURSE CONTENT	Prerequisite
BFG 40803	GEOGRAPHICAL INFORMATION SYSTEMS FOR CIVIL ENGINEERING	This course provides an introduction to the basic concepts, features, and capabilities of GIS. The focus of this course is to learn the usefulness of GIS in solving problems in various civil and environmental engineering disciplines. Also to develop basic skills of using GIS software for problem solving. Students are trained to become familiar in usage of ESRI ArcGIS software through the project. The course will require the completion of a series of homework assignments, some of which will be part of a mini team project that solves a selected civil engineering or environmental engineering problem.	<ol style="list-style-type: none"> 1. INTRODUCTION TO GEOGRAPHICAL INFORMATION SYSTEM (GIS) 2. DATA SOURCES 3. DATA MODEL 4. GIS DATA MANAGEMENT (DBMS) DESIGN 5. SPATIAL ANALYSIS 	
BFA 40203	DESIGN OF WATER SUPPLY	This course introduces students to establish the knowledge and understanding in public water supply, starts with the treated water standard, low flow estimation of a river and the typical surface water treatment (including aeration, coagulation, flocculation, sedimentation and softening). Design works include water demand, intake work, distribution network, pumping requirement, and hydraulic analysis. Water distribution, pumping, storage tank and reticulation systems are designed according to MWA Design Guidelines for Water Supply Systems.	<ol style="list-style-type: none"> 1. INTRODUCTION 2. FLOW IN STREAM AND RIVER 3. PHYSICAL, CHEMICAL TREATMENTS AND DISINFECTION 4. WATER DEMAND 5. WATER DISTRIBUTION 6. CAPACITY AND PRESSURE REQUIREMENT 7. HYDRAULIC ANALYSIS OF DISTRIBUTION SYSTEM 8. PUMP 9. PREPARATION OF HYDRAULIC PROFILES 	Hydrology, Hydraulic, Environmental Engineering
BFW 40203	HYDROLOGICAL ANALYSIS AND DESIGN	Hydrological analysis and design involves analyzing quantity of surface flows for the design of drainage in natural and developed systems. This course helps students in establishing the knowledge and understanding in hydrological analysis and design.	<ol style="list-style-type: none"> 1. INTRODUCTION 2. PEAK FLOW ESTIMATION 3. HYDROGRAPH ANALYSIS AND SYNTHESIS 4. FREQUENCY ANALYSIS 5. PROBABILITY AND STATISTICS IN HYDROLOGY 6. SURFACE WATER HYDROLOGY 7. EROSION AND SEDIMENTATION 	Hydrology and Hydraulic