Course Specifications

General Information

Course name	Hydrology
Course number	GEOG3318
Faculty	
Department	
Course type	Major Needs
Course level	3
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - 1 – Knowledge of general concepts About the hydrology. 2 – To train students how to make researches about subjects belong hydrology. 3 – To know characteristics of different types of water properties 4 – Let students to know moer about the Shape of ground and underground water

Intended Learning Outcomes

Knowledge and Understanding	* 1 – To find data base includes Differentiates subjects in ground and underground water . 2 – To able students of understanding the water properties 3 – The student will Differentiates between Differentiates water recourses.
Intellectual Skills	* 1 – Development of students mental abilities for what happens and will happens to the water recourses. 2 – Scientific analyzing for changes in water recourses. 4 - Development of students abilities in field working.
General Skill	* 1 – To find an important base in different sides of water Knowledge. 2 – To realize and understand the fact of water recourses Knowledge. 3 – To understand facts of groups through working, where he will get best results. 4 – To learn serious conversation to arrive to all sides of subjects understanding.

Course Contents

1 - Focuses on studying the hydrological cycle, precipitation types and measuring instruments. Precipitation data adjustments and selections. Evaporation, transpiration and infiltration. Measuring surface runoff, and analysis the time-curve discharge and hydrograph. Wells construction and types. Subsurface water and the relationships between surface and underground water. Porosity and water-soils properties. Methods for determine the direction and speed of underground water. Darcy Low. Shape of underground water level and maps. Artesian water and confined beds. Physical and chemical water properties. Laboratory analysis of water and soils.

Teaching and Learning Methods for the Disabled Students

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Students Assessment

Assessment Method	TIME	MARKS
Half term Exam.	Half term Exam.: mid. term	Half term Exam.: 30 marks
–Students attendance and absence. 3 – Activities and fast researches	Students attendance and absence.: 5 marks. 3 – Activities and fast researches.: 5 marks	10 markd
Final Exam	– Final Exam.: End term	Final Exam.: 60 marks

Books and References

Essential books	Prof Dr – abrihem hemada – hydrology and ground water cairo univ – Egypt (2015)
Recommended books	– - Prof Dr R.C.ward principles of hydrology . univ of HULL . UK (2014)