**ADEPOJU MARY ABIMBOLA**

**17/ENG03/004**

**CIVIL ENGINEEEING**

**CVE 302**

**HYDROLOGY**

1. **What is GIS?**

**Geographic Information System (GIS)** is a system designed to capture, store, manipulate, analyze, manage, and present spatial or geographic data. GIS application are tools that allow users ted searches), analyze spatial information, edit data in maps, and present the results of all this operation.

GIS have become a useful and important tool on the field of hydrology to the study and manage of earth’s water resources. Because water in its occurrence varies spatially and temporary throughout the hydrologic cycle, its study using GIS is especially practiced.

1. **What are the Application of GIS in Hydrology?**

The application of Geographic Information System includes:

* GIS can be used to synthesize data to form a holistic view of the watershed.
* The GIS can be applied in data modelling functions like contouring of groundwater levels.
* Analyzing groundwater falls.
* Landfill siting and selection of groundwater development and artificial recharge sites.

1. **Tools Used in GIS**

The tools used in GIS include:

* The buffer tool,
* The clip tool,
* The merge tool,
* The dissolve tool,
* The intersect tool,
* The union tool,
* The erase (difference) tool.