Description of “Remote Sensing in Geomorphology”

Information			
Administering Department	**Remote Sensing**	**College**	**Remote Sensing & Geophysics College**
Module Leader	**Farouk .M .Ali. Al-zaidy**	**e-mail**	**Farouk.alzaidy@gmail.com**
Module Leader’s Acad. Title	**Assist. Prof. dr**		
Scientific Committee Approval Date	**9/12/2024**		

Course Intended Outcomes
30 hours of facilitation lectures theoretical , and 15 hours practical discussions, and applied , and presentation. The use of case studies will emphasized in group projects involving select system . (3 credit hours). **At the end of the course , students are expected to learn : the ability to understand the advanced of Geomorphology .**

Remote sensing in Geomorphology topics	
Week 1	**Backgrounds of Geomorphology** **The scope of Geomorphology .** **History of Development of Geomorphic ideas .** **The dawn of Modern Geomorphic Ideas.** **Development in Europe.**
Week 2	**Developments of north America.** **Davis – the great definer and analyst .** **Recent trends in Geomrphology**
Week 3	**An Analysis of the Geomorphic processes .** **Geomorphic Agents and processes**

	Geomorphic processes: **Weathering .** **Mass Wasting or gravitative transfer.** **Erosion (including transportation) by :** **Groundwater .** **Waves .** **Wind .**
Week 4	**Gleciers .** **Worck of organisms, including man .** **Hypogene or endogenetic processes .**
Week 5	**Physical Weathering processes .** **Chemical Weathering processes .** **Zone of Weathering .** **Volcanism .**
Week 6	**Climatic influences upon Geomorphic processes.** **The concept of Morphogenetic regions .**
Week 7	**Weathering, soil processes , and mass wasting .** **Lowering of surfaces by Weathering.** **Creation and modification of land forms.** **Soils .** **The soil profile .**
Week 8	**Formations of soil .** **Description of major soil groups .** **Mass – wasting and its Geomorphic significance .** **Solifluction .** **Patterned ground .**
Week 9	**Stream deposition .** **Classification of alluvial deposits.** **Land forms and Geologic features resulting from stream deposition .** **The flood plain and associated features.** **Meander belt deposits .**
Week 10	**Braided stream deposits .**

	Deltaic plain deposits . **River deltas .** **Alluvial fans bajadas .** **Plains of older alluvium .**
Week 11	**Karst topography .** **Important karst areas .** **Lesser karst areas .** **Conditions Essential to full development of karst .**
Week 12	**Features characteristic of karst regions .** **Terra rossa .** **Lapies .** **Sinkholes and associated forms .** **Natural tunnels and bridges .** **Cave lengths .** **Water table in karst areas .** **The karst Geomorphic cycle .**
Week 13	**Applied Geomorphology .** **Application of Geomorphology to hydrology .** **Application of Geomorphology to Engineering projects .** **Application of Geomorphology to military .** **Other applications of Geomorphology .**
Week 14	**Project Presentations**
Week 15	**Pre-final exam**

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	**Principles of Geomorphology / second edition /William D. Thornbury . and john wiley New York . University**	Yes
Recommended Texts	**اصول الجيومورفولوجية – دراسة الاشكال التضاريسية لسطح الارض**	yes

	الدكتور حسن سيد احمد ابو العينين – جامعة الاسكندرية – مصر دار النهضة العربية للنشر – بيروت - لبنان	
Websites	موقع عديدة على شبكة الانترنت	