

Date:	Examination No.:	Version: 4/9/2023	Start: 4/9/2023
Module Name - Code	Engineering Hydrology - 1125		
Module Language:	English		
Responsible:	Evan Oghstin Slaiwa		
Lecture (s):	Mr. Evan Oghstin Slaiwa/ MSc		
College:	College of Engineering – Salahaddin University		
Duration:	15 week – Fall (Fifth Semester)		
Course outcomes:	At the end of the semester, students would be able to student is introduced to Engineering Hydrology including hydrological cycle on earth , fundamentals of hydrology, storm analysis ,analysis of rainfall data, duration, return period , characteristics of catchment areas, surface runoff and its computation ,hydrological measurement, evaporation , evapotranspiration, infiltration , infiltration index , rainfall losses ,watershed hydrology, Methods of surface runoff estimations, hydrographs, unit hydrograph ,synthetic unit hydrographs ,rational method , flood , flood routing , routing of river flow. By the end of this course you should be able to Analysis the rainfall data, storm analysis, estimate of the water losses, and find of the peak discharge for designing.		
Course Content:	1 st week Introduction to engineering hydrology. 2 nd week precipitation, 3 rd week Evaporation and Evapotranspiration, 4 th week Infiltration, 5 th week Ground water flow, 6 th week well hydraulics, 7 th week Stream flow measurement, 8 th week Rating curves and mass curves, 9 th week midterm exam 10 th week Elemental hydrographic and unit hydrographic, 11 th week Flood and flood estimation, 12 th week Reservoir investigation and routing, 13 th week flood routing and 14 th week frequency analysis. 15 th final exam.		
Literature:	1- Engineering hydrology 3rd edition, E.M Wilson. 2- Hydrology and Quality of water resources by Mark J.Hammer and Mackichan. 3- Introduction to Environmental Engineering by Davis. 4- Handbook of hydrology by David R. Maidment. 5- علم المياه و تطبيقاته د. باقر كاشف الغطاء 6- علم الهيدرولوجي د. وافي حسين 7- ترجمة الهيدرولوجي للمهندسين / ترجمة الدكتور علي اسماعيل		
Type of Teaching:	3 hrs. theory per week 1 hr. tutorial per week		
Pre-requisites:	None		

Frequency:	Yearly in fall semester										
Requirements for credit points:	<p>For the award of credit points, it is necessary to pass the module exam. The module exam contains: A mid-term exam, class room activities, quizzes, home works and final exam on December. So, the final grade will be based upon the following criteria:</p> <table border="1" data-bbox="978 277 1407 602"> <tr> <td>First Mid-term exam</td> <td>15%</td> </tr> <tr> <td>second Mid-term exam</td> <td>15%</td> </tr> <tr> <td>Activities and Quizzes</td> <td>10%</td> </tr> <tr> <td>Final exam</td> <td>60%</td> </tr> <tr> <td>Total</td> <td>100%</td> </tr> </table> <p>Student's attendance is required in all classes.</p>	First Mid-term exam	15%	second Mid-term exam	15%	Activities and Quizzes	10%	Final exam	60%	Total	100%
First Mid-term exam	15%										
second Mid-term exam	15%										
Activities and Quizzes	10%										
Final exam	60%										
Total	100%										
Credit point:	5										
Grade Distribution:	<p>The Grade is generated from the examination result(s) with the following Annual Effort (w): 40% Final Exam (w): 60%</p>										
Work load:	The workload is 135h. It is the result of 60h attendance and 75h self-studies.										