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| **Date:** | Examination No.: | Version:2023-2024 | Start:7/1/2024 |
| **Module Name - Code** | Dam Engineering 6129 |
| **Module Language:** | English |
| **Responsible:** | Taban Kawes Hamad  |
| **Lecture (s):** | Taban Kawes Hamad  |
| **College:** | College of Engineering – Salahaddin University-Erbil |
| **Duration:** | 15 week – 1 semester |
| **Course outcomes:** | Dam classification, Types of concrete dams; Gravity dam; Criteria for selection of dam site; Foundation Treatments; Types of loads; Safety criteria; Gravity analysis; Elementary profile of gravity dams; Top width and free board; Design of gravity dam; Galleries; Introduction to Arch and Buttress dams.The student will know; Types of dams; Criteria for selection of dam site; Design of gravity dam and check the stability, Introduction to Arch and Buttress dams. |
| **Course Content:** | **1week** Introduction to concrete dams, dam classifications**1week**Criteria for selection of dam site, Foundation Treatments,**4weeks**Types of loads on gravity dam**4weeks**Safety criteria, Gravity analysis**1weeks**Elementary profile of gravity dams**1week**Top width and free board; Design of gravity dam; Galleries;**3week** Introduction to Arch and Buttress dams |
| **Literature:** | 1. Punmia, B.C., and Pande B.B. Lal, “Irrigation and Water Power Engineering”, Laxmi Publications (p) Ltd, 1992.
2. Asawa G.L.” Irrigation and Water Resources Engineering”, New Age International (p) Limited Publications, 2005.
3. Varshney, R.S., S.C. Gupta and R.L. Gupta,” Theory and Design of Irrigation Structures, Volume I & II”, New Chand & Bros Roorkee ,1979.
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| **Type of Teaching:** | Different forms of teaching will be used to reach the objects of the course. Notes to be written on the board especially design equations, head titles, definitions and summary of conclusions, classification of materials and any other illustration, there will be class room discussions and the lecture will give enough background to solve examples. Power points presentation will be use when required; besides work sheets will be designed to let the chance for practicing. Students should read the lectures notes regularly and to participate the class room discussions. |
| **Pre-requisites:** | None |
| **Preparation Modules:** |  |
| **Frequency:** |  Spring Semester  |
| **Requirements for credit points:** | For the award of credit points, it is necessary to pass the module exam. It contains:quizzes during the academic semester, Assignments and Final examination.**Student's attendance is required in all classes**. |
| **Credit point:** | 5 |
| **Grade Distribution:** | The following grade system is used for the evaluation of the module exam: The module exam is based on the summation of two categories of evaluations:**First: (40%)** of the mark is based on the academic semester effort which includes -           quizzes during the academic semester -           Assignments and class works**Second: (60%)** of the mark is based on final examination that is comprehensive for the whole of the study materials reviewed during the academic semester. |
| **Work load:** | The workload is 135 hrs. It is the result of 45 hrs. attendance and 90 hrs. self-studies (Assignments, preparation for exam and applications). |