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| Date: | Examination No.: 15367 | Version:1/9/2019 | Start: 1/9/2019 |
| **Module Name - Code** | Engineering Geology - 1107   |
| **Module Language:** | English |
| **Responsible:** | Professor Dr.  Yousif Ismael Mawlood |
| **Lecture (s):** | Professor Dr.  Yousif Ismael Mawlood |
| **College:** | College of Engineering – Salahaddin University |
| **Duration:** | 15 weeks – 1 semester |
| **Course outcomes:** | To learn students are Principals of Engineering Geology (Earth structure, Rocks Minerals, Crystals, Groundwater, etc.…). How to apply these principles in the field (in construction engineering projects). |
| **Course Content:** |

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| Introduction, Importance of Engineering Geology in Civil Engineering, Earth Structure. Rocks and Minerals, Weathering, Erosion and Soil Formation. Structural Geology, Folds, Faults, joints, Physical and Engineering Properties of Rocks; Rock Deformation and Mechanical Properties. The Stability of Slopes. Geological Problems Related to Civil Engineering, Stabilization of Slopes.  Engineering Geology and Earthquakes. Surface Water, Underground Water in Relation to Engineering Works. Seismic, Types of Waves. Topographic and Geologic Maps. |

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| **Literature:** | 1.   Price DG. Engineering geology: principles and practice: Springer Science & Business Media; 2008.2.   De Vallejo LG, Ferrer M. Geological engineering: CRC press; 2011.3.   Parriaux A. Geology: basics for engineers: CRC Press; 2018.4.  Jassim SZ, Goff JC. Geology of Iraq: DOLIN, sro, distributed by Geological Society of London; 2006.                     |
| **Type of Teaching:** |

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| 2 hrs. of theory lectures in class   |

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| **Pre-requisites:** |  |
| **Frequency:** | Yearly in the fall semester |
| **Requirements for  credit points:** |

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| For the award of credit points, it is necessary to pass the module exam.Classroom activities +quizzes + home worksThe module (Mid-term and final) exams:(Written 120 min for the theoretical exam)**Student attendance is required in all classes**. |

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| **Credit point:** | 3 |
| **Grade Distribution:** | The Grade is generated from the examination result(s) with the following20% quizzes, how works, and activity20% mid-term exam60% final theoretical Exam |
| **Workload:** | The workload is 75 hrs. It is the result of 30 hrs. attendance and 45 hrs. self-studies. |