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| **Date:** | Examination No.:  | Version: 2022-2023 | Start: 2/2023 |
| **Module Name - Code** | Theory of Structures - 6121 |
| **Module Language:** | English |
| **Responsible:** | Dr. Ghassan Marooki Werdina / Ph.D. |
| **Lecture (s):** | Dr. Ghassan Marooki Werdina / Ph.D. |
| **College:** | College of Engineering – Salahaddin University |
| **Duration:** | 15 weeks – 2nd semester |
| **Course outcomes:** |  In this course students will be introduced to the analysis of statically determinate and indeterminate structures.  The course covers the fundamental concepts of determining the structural stability and determinacy, analysis  of statically determinate beams, frames and trusses. It also covers the analysis of moving loads and influence  lines for beams. |
| **Course Content:** | * Introduction to structural analysis
* Shear, moment and axial diagrams for beams.
* Analysis of frames.
* Shear, moment and axial diagrams for frames.
* Types and analysis of trusses.
* Analysis of trusses by joint method.
* Analysis of trusses by section method.
* determinacy and stability of beams, frames and trusses.
* Moving loads and influence lines.
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| **Literature:** | 1. Structural analysis, 8th Edition.

R.C. Hibbeler.1. Structural and stress analysis

T.H.G. Megson.1. Handbook of structural engineering

Chen Wai-Fah. |
| **Type of Teaching:** | 3 hrs. Theoretical |
| **Pre-requisites:** |  |
| **Frequency:** | semester |
| **Requirements for credit points:** | For the award of credit points, it is necessary to pass the module exam. It contains:Five examination during the academic semester 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 five examinations during the academic semester.**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. |