Course Syllabus

020CMMGS3 Steel Structures

1. **Course number and name:** 020CMMGS3 Steel Structures
2. **Credits and contact hours:** 6 credits, 3x1:15 course hours per week
3. **Instructor's or course coordinator's name:** Fadi GEARA, Joanna NSEIR
4. **Textbook and other supplemental material:**
   - **a.** Eurocode 0 : Bases de calcul des structures - 2001
   - **b.** Dimensionnement des structures en béton – traité de génie civil de l'Ecole Polytechnique fédérale de Lausanne – Vol. 7, Presses Polytechniques Romandes (R. Walther, M. Miehlbradt)- 1990
   - **c.** Le projet de construction avec les Eurocodes (Jean-Armand Calgaro) - 2004
   - **d.** Instructor's Class Notes
5. **Specific course information**
   - **a. Catalog description:** This class aims at providing students with a solid background on principles of steel structural design based on the Eurocodes 3. Students will be exposed to the theories and concepts of steel design and analysis both at the element and system levels.
   - **b. Prerequisites:** 020ACTGS2 Basis of Structural design.
   - **c. Required/Elective/Selected Elective:** Required major course for all Civil Engineering students.
6. **Specific goals for the course:**
   - **a. Specific outcomes of instruction:**
     - Understanding of the concept of steel design.
     - Analyze a structure to obtain actions such as bending moments, shear forces…
     - Design steel structural elements for design actions on the cross-section level and the member level.
     - Analyze and understand the functioning and load path of an assembly.
   - **b. KPIs addressed by the course:**

KPI	a2	c3	e1	e3
Covered	x	x	x	x
Assessed	x	x		x
Give Feedback	x	x		x

7. **Brief list of topics to be covered and approximate number of lectures:**
   1. Introduction (1 hour)
   2. Design (15 hours)
   3. Tension in members (4 hours)
   4. Cross-section design (10 hours)
   5. Compression in members (5 hours)
   6. Bending in members (5 hours)
   7. Combined loading in members (6 hours)
   8. Assembly (6.5 hours)