



**The Hashemite University  
Faculty of Engineering  
Civil Engineering Program  
Course Syllabus**



<b>Course Title:</b>	<b>Steel Structures</b>	<b>Course Number: 110401425</b>
<b>Designation:</b>	Compulsory	<b>Prerequisite(s): 110401315</b>
<b>Instructor:</b>	Dr. Hasan Katkhuda	<b>Instructor's e-mail: hasan@hu.edu.jo</b>
<b>Office Hours:</b>	11:00 – 12:00: Sun., Tue. & Thurs., 8:30 – 9:30: Mon. & Wed.	

**Course Description (catalog):** This is an introductory course to design steel structures using the LRFD method. Topics covered include tension members; compression members; beam design; serviceability requirements; beam-column design; bolted and welded connections.

**Textbook(s) and/or Other Supplementary Materials:**

McCormac and Nelson, Structural Steel Design – LRFD Method, Latest Edition, Prentice Hall.  
Manual of Steel Construction, Latest Edition, American Institute of Steel Construction.

**References:**

Manual of Steel Construction, Latest Edition, American Institute of Steel Construction.

**Major Topics Covered:**

Topics	No. of Weeks	Contact hours*
Introduction to Structural Steel Design	1	3
Specifications, Loads and Methods of Design	1	3
Tension Members	3	9
Compression Members	3	9
Flexural Members	3	9
Beam- Columns	2	6
Connections	2	6
<b>Total</b>	<b>15</b>	<b>45</b>

\*Contact hours include lectures, quizzes and exams

**Specific Outcomes of Instruction (Course Learning Outcomes):**

**After completing the course, the student will be able to:**

1. Analyze and design of tension and compression members in accordance with the latest AISC-LRFD Specification. (a, c, e)
2. Analyze and design of flexural members and beam-columns in accordance with the latest AISC-LRFD Specification. (a, c, e)
3. Analyze and design of simple and eccentric connections. (a, c, e)

**Student Outcomes (SO) Addressed by the Course:**

#	Outcome Description	Contribution
<b>General Engineering Student Outcomes</b>		
(a)	an ability to apply knowledge of mathematics, science, and engineering	L (10)
(b)	an ability to design and conduct experiments, as well as to analyze and interpret data	
(c)	an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability	H(55)
(d)	an ability to function on multidisciplinary teams	
(e)	an ability to identify, formulate, and solve engineering problems	M(35)
(f)	an understanding of professional and ethical responsibility	
(g)	an ability to communicate effectively	
(h)	the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context	
(i)	a recognition of the need for, and an ability to engage in life-long learning	
(j)	a knowledge of contemporary issues	



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(k)	an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	
<b>H=High, M= Medium, L=Low</b>		

<b>Grading Plan:</b>	1st Exam	30 Points	<b>7/3/2018 [ class time]</b>
	2nd Exam	30 Points	<b>11/4/2018 [ class time]</b>
	Final exam	40 Points	Will be announced by the registrar

**General Notes:** Beware of Plagiarism: copying and handing in for credit someone else's work  
Any plagiarism case will result in an automatic 'F' for the course

**Prepared by:** Dr. Hasan Katkhuda **Date:** 28<sup>th</sup> Jan. 2018