The Hashemite University
Faculty of Engineering
Course Syllabus
Department of Mechanical Engineering

Course Title:	**Senior Design II 2 (2,0, 0)**	**Course Number:**	110402573
Designation:	Compulsory	**Prerequisite(s):**	ME495
Instructor:		**Instructor's e-mail::**	
Office Hours:			

Course Description (catalog): Completion of Senior Design I in planning, design, construction and/or management of an engineering project that handles contemporary engineering problems under the supervision of one or more faculty members. Similar to ME 495 the course allows the student to apply the knowledge attained from the various courses of the undergraduate program to prepare the proper approach of solution and completion to his engineering project.

Prerequisite(s):

Textbook(s) and/or Other Supplementary Materials:

Primary: None

Supplementary:

- Fundamentals of Engineering Design, 2nd Edition, B. Hyman, Prentice Hall, USA, 2002, ISBN-13: 978-0130467126
- Teamwork and Project Management, 3rd Edition,, K.A. Smith, P.K. Imbrie, McGraw-Hill, 2005, ISBN-13: 978-0073103679
- Technical Writing, 7th Edition, D.C. Reep, Longman, UK, 2008, ISBN-13: 978-0205603404

Specific Outcomes of Project (Course Learning Outcomes):

1. Continue to apply the skills they have learned in other courses to analyze the performance of the draft design prototype proposed in ME495 **(a, c, e)**
2. Make necessary presentations for critical review of their work. **(d, g)**
3. Generate necessary project reports (project proposal, progress reports, design reports and final reports). **(d, e, g)**
4. Use of modern tools and techniques appropriate for engineering analysis. **(k)**
5. Ability to analyze the problem and formulate a method to solve it in a systematic way with given constraints of time, budget, and other resources **(c, e)**
6. Demonstrate the ability to work effectively, independently, and in teams **(d)**
7. Design, build, and test a system or subsystem to meet given specifications. **(b, c)**
8. Consider the economic, environmental, social, political, ethical, health and safety impact of their final product, as well as study its manufacturability, and sustainability. **(c, h, j)**
9. Demonstrate an understanding of professional and ethical responsibility. **(f)**
10. Demonstrate recognition of the importance of life-long learning. **(i)**

Student Outcomes (SO) Addressed by the Course:

#	Outcome Description	Contribution
General Engineering Student Outcomes		
(a)	An ability to apply knowledge of mathematics, science, and engineering	M
(b)	An ability to design and conduct experiments, as well as to analyze and interpret data	H
(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
(d)	An ability to function on multidisciplinary teams	L

(e)	An ability to identify, formulate, and solve engineering problems	H
(f)	An understanding of professional and ethical responsibility	M
(g)	An ability to communicate effectively	H
(h)	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context	L
(i)	a recognition of the need for, and an ability to engage in life-long learning	M
(j)	A knowledge of contemporary issues	M
(k)	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice	H
H=High, **M**= Medium, **L**=Low		