



**Jordan University of Science and Technology**  
**Faculty of Engineering**  
**Civil Engineering Department**

CE442 Pavement Materials & Design (1)

Summer Semester 2019-2020

**Course Catalog**

3 Credit Hours. The course furnish the student with basic understanding of pavement types, components, and to be able to design flexible pavement using AASHTO 1993 design method. Flexible Pavement Distress, Performance, Response, and Analysis is also covered. Pavement materials and their characterization is also [resented].

**Text Book**

<b>Title</b>	Pavement Analysis and Design
<b>Author(s)</b>	Yang H. Huang
<b>Edition</b>	2nd Edition
<b>Short Name</b>	Ref. # 1
<b>Other Information</b>	

**Instructor**

<b>Name</b>	<b>Dr. Aslam Alomari</b>
<b>Office Location</b>	C2L1
<b>Office Hours</b>	Sun : 13:00 - 14:30 Mon : 08:30 - 10:00 Tue : 13:00 - 14:30 Wed : 13:00 - 14:30
<b>Email</b>	aaalomari3@just.edu.jo

**Class Schedule & Room**

Section 2:  
Lecture Time: Sun, Mon, Tue, Wed : 11:30 - 13:00  
Room: منصة الكترونية

Prerequisites		
Line Number	Course Name	Prerequisite Type
232021	CE202 Strength Of Materials	Prerequisite / Study
233450	CE345 Transportation Engineering	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Introduction to Pavement Engineering	From Ref. # 1
Week 2	Engineering Properties of Soils in Pavement Engineering	From Ref. # 1
Weeks 3, 4, 5	Aggregate and Asphalt Binder Testing and Evaluation	From Ref. # 1
Weeks 6, 7	Marshall Mix Design Method	From Ref. # 1
Weeks 8, 9	Introduction to SuperPave Mix Design Method	From Ref. # 1
Weeks 10, 11	Resilient Modulus	From Ref. # 1
Weeks 12, 13	Traffic Loading and Volume	From Ref. # 1
Weeks 14, 15, 16	Flexible Pavement Design	From Ref. # 1

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Identify types of pavements and pavement selection. [1SLO6]	5%	
Identify high quality soils to be used under the pavement structure. [1SLO5]	5%	
Understand aggregate and asphalt binder properties pertaining to pavement engineering. [1SLO1, 1SLO3]	20%	
Be able to perform Marshall and partially SuperPave Mix Design methods. [1SLO1, 1SLO2, 1SLO3]	20%	
Characterize paving materials and describe some of the laboratory tests conducted on them (resilient modulus). [1SLO1, 1SLO3]	10%	
Determine Equivalent Single Axle Load repetitions for a given project. [1SLO2]	10%	
Design a flexible pavement using different design procedures. [1SLO1, 1SLO2]	30%	

Relationship to Program Student Outcomes (Out of 100%)						
SLO1	SLO2	SLO3	SLO4	SLO5	SLO6	SLO7
36.67	31.67	21.67		5	5	

Evaluation
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Assessment Tool	Weight
Final Exam	100%

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