

1.	Title of the course	Pavement Materials and Construction
2.	Course number	CE502L
3.	Structure of credits	3-0-0-3
4.	Offered to	PG
5.	New course/modification to	Modification To
6.	To be offered by	Department of Civil and Environmental Engineering
7.	To take effect from	July 2022
8.	Prerequisite	CoT
9.	<p>Course Objective(s): This course presents practices and techniques used in the construction of Hot Mix Asphalt (HMA) and Portland Cement Concrete (PCC) pavements. The course will provide engineering students exposure to many elements of construction activities in order to aid in the analysis of solving construction-related problems. Specifically, the students will develop a working knowledge of HMA and PCC pavement construction in order to understand quality of pavement construction practices</p>	
10.	<p>Course Content: Roadway Materials, Performance Tests, Parametric Relationships, Soils, Geotechnical Testing, Sub-base, Base Preparation in relation to pavement preconstruction activities HMA Plant Operations, Mix Delivery, Placement, Joint Construction, Compaction PCC Production, Plant Operations, Paving Techniques, PCC Curing and Sawing; Traffic Management During Pavement Construction project Organization and Quality Assurance (QA) Quality Control (QC) Documents, Preconstruction Pre-paving Conferences, Database Management; Definitions, Specifications, Statistical Sampling, QC Charts; Problem Solving during & after Construction, Performance Criteria, Sustainability</p>	
11.	<p>Textbook(s):</p> <ol style="list-style-type: none"> 1. "Hot-Mix Asphalt Paving Handbook 2000" Prepared by the Transportation Research Board, with financial support from the American Association of State Highway and Transportation Officials, Federal Aviation Administration, National Asphalt Pavement Association and US Army Corps of Engineers. 2. Roberts F L, Kandhal P S, Brown E R, Lee D Y, and Kennedy T W "Hot Mix Asphalt Materials, Mixture Design, and Construction", National Asphalt Pavement Association Education Foundation, MD, USA, Second Edition, 1996. 	
12.	<p>Reference(s):</p> <ol style="list-style-type: none"> 1. "Concrete Pavement Design and Construction Practices", State of the Art Technical Digest, Prepared under FHWA Task Order DTFH61-98-T07007, Applied Pavement Technology, Inc, Urbana, IL, USA, May 1999. 2. Mamlouk M S, and Zaniewski J P "Materials for Civil and Construction Engineers" Pearson Prentice Hall, 2010. 3. MoRTH Specifications for Roads and Bridge Works, New Delhi. 4. AASHTO Specifications for Road Construction. 5. Relevant IRC and other Codes. 	