

NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

DEPARTMENT OF CIVIL ENGINEERING

M.Tech. (Transportation Engineering and Management)

**COURSE PLAN – CE606 PAVEMENT CONSTRUCTION, EVALUATION AND
MANAGEMENT**

Semester: II

COURSE OUTLINE TEMPLATE			
Course Title	PAVEMENT CONSTRUCTION, EVALUATION AND MANAGEMENT		
Course Code	CE606	No. of Credits	3
Department	Civil Engineering	Faculty	Dr. V. Sunitha
Pre-requisites Course Code	Nil		
Course Coordinator(s) (if, applicable)	NA		
Other Course Teacher(s)/Tutor(s) E-mail	Nil	Telephone No.	0431 2503165 (O) 9443302930 (M)
Course Type	Core course		
COURSE OVERVIEW			
The course give overall view of the flexible and rigid pavement construction, stabilization methods for pavement layers and pavement management systems.			
COURSE OBJECTIVES			
<ul style="list-style-type: none"> • To learn the concept of pavement construction • To evaluate the pavements based on the functional and structural characteristics • To understand the concept of Pavement Management System, pavement failures and its evaluation 			
COURSE OUTCOMES (CO)			
Course Outcomes	Aligned Programme Outcomes (PO)		
• carry out the construction of flexible and rigid pavements	a, b, c, d, r, l		
• understand the structural and functions failure and the evaluation of pavements	a, b, c, d, e, g, h, l		
• do develop pavement management systems	a, b, c, d, j, l		

COURSE TEACHING AND LEARNING ACTIVITIES			
S.No.	Week	Topic	Mode of Delivery
1	1 st Week of Jan 2017	Flexible Pavement Construction – compaction, embankments	C&T, PPT
2	2 nd Week of Jan 2017	Construction methods - sub-base, base	C&T, PPT
3	3 rd Week of Jan 2017	Construction methods - binder and surface course layers	C&T, PPT
4	4 th Week of Jan 2017	CC pavement - construction	C&T, PPT
5	1 st Week of Feb 2017	Interlocking block pavements, joints	C&T, PPT
6	2 nd Week of Feb 2017	Stabilization - soil-aggregate mixes and compaction	C&T, PPT
7	3 rd Week of Feb 2017	Mechanical, soil-cement stabilisation methods	C&T, PPT
8	4 th Week of Feb 2017	Soil-bitumen and soil-lime stabilisation methods	C&T, PPT
9	2 nd Week of Mar 2017	Use of additives, Numerical problems on mix design and applications	C&T, PPT, Tutorial
10	3 rd Week of Mar 2017	Pavement Distress - Functional evaluation of pavements	C&T, PPT
11	4 th Week of Mar 2017	Structural evaluation of pavements	C&T, PPT
12	5 th Week of Mar 2017	Pavement strengthening based on deflection as per IRC	C&T, PPT, Tutorial
13	1 st Week of Apr 2017	Pavement Management Systems - Project level and Network level, Pavement performance prediction	C&T, PPT
14	2 nd Week of Apr 2017	Budget forecasting, optimization methodologies, life cycle costing	C&T, PPT

COURSE ASSESSMENT METHODS				
S.No.	Mode of Assessment	Week/Date	Duration	% Weightage
1	Assessment 1	2 nd Week of Feb 2017	1 hour	20
2	Assessment 2	4 th Week of Mar 2017	1 hour	20
3	Assignments	--	--	10
4	Term Project	--	--	10
5	Final Assessment	4 th Week of Apr 2017	3 hours	40

ESSENTIAL READINGS : Textbooks, reference books Website addresses, journals, etc

1. W.Ronald Hudson, Ralph Haas and Zeniswki, *Modern Pavement Management*, Mc Graw Hill and Co
2. Yang H. Huang, *Pavement Analysis and Design*, Pearson Prentice Hall, 2004.
3. Yoder and Witzech, *Pavement Design*, McGraw-Hill, 1982.

COURSE EXIT SURVEY (mention the ways in which the feedback about the course is assessed and indicate the attainment also)

The Feedback form will be collected from the students in 3rd Week of Apr 2017.

COURSE POLICY (including plagiarism, academic honesty, attendance, etc.)

100 % attendance is desirable, with a minimum of 75 %.
The grading of marks is as given in M.Tech. NITT regulations.

ADDITIONAL COURSE INFORMATION

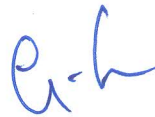
The Course Coordinator is available for consultation during working hours.
Queries may also be emailed to the Course Coordinator directly at sunitha@nitt.edu

FOR SENATE'S CONSIDERATION

Course Faculty



CC-Chairperson



HOD

