

#### **DEPARTMENT OF CIVIL ENGINEERING**

Name of the		AN - PART I	
programme and	M.Tech		
specialization			
Course Title	TRANSPORT OF WAT		
Course Title	TRANSPORT OF WATER AND WASTE WATER		
Course Code	CE704	No. of Credits	3
Course Code of Pre-			
requisite subject(s)			
Session	July / January	Section	<u> </u>
	2019	(if, applicable)	
Name of Faculty	Dr. R. Manjula	Department	Civil Engineering
		Doparanont	own Engineering
Official Email	manju@nitt.edu	Telephone No.	04312503167
Name of Course	-		
Coordinator(s)			
(if, applicable)			
Official E-mail	-	Telephone No.	
Course Type (please	Core course	Elective co	urse
ck appropriately)		V	
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To design sewer network and water supply distribution network for various field conditions.	b,c,d	
To troubleshoot water and sewage transmission	e,g	
To use various computer software for the design of water and sewage network	g,h,i	

#### COURSE PLAN - PART II

### **COURSE OVERVIEW**

This course gives an overview of design of water supply distribution networks and sewage network and its importance.

	COURSE TEACHING AND LEARNING ACTIVITIES (Add more rows)			
S.No.	Week/Contact Hours	Topic	Mode of Delivery	
1	1	Fluid properties-fluid flow -continuity principle, energy principle and momentum principle - frictional head loss in free and pressure flow	MD1	
2	2	Minor heads losses, Carrying Capacity - Flow measurement	MD1	
3	3	Estimation of storage capacity - impounding reservoirs Intakes - gravity and pressure conduits	MD1	
4	4	Hydraulics of fluid flow -pumps and accessories -capacity of pumps	MD5	
5	5	selection of pumps - maintenance	MD5	
6	6	Economic design of pumps and pumping mains , Jointing, laying and maintenance	MD1	
7	7	Water hammer analysis -water distribution pipe networks Design	MD1	
8	8	Appurtenances -corrosion prevention - minimization of water losses - leak detection -storage reservoirs	MD5	



9	9	Estimation of storm water runoff - Formulation of rainfall intensity duration and frequency relationships	MD1
10	10	Rational methods -Planning factors - Design of sanitary sewer -partial flow in sewers	MD1
11	11	Economics of sewer design -Wastewater pumps and pumping stations- transition flow critical depth in sewers -draw down curves and hydraulic jump	MD1
12	12	Use of computer software in water transmission, water distribution, sewer and storm water design –EPANET 2.0, SEWER, BRANCH and Canal ++	MD5

#### COURSE ASSESSMENT METHODS (shall range from 4 to 6)

S.No.	Mode of Assessment	Week/Date	Duration	% Weightage
1	Assessment I	6 <sup>th</sup>	1 hour	20
2	Assessment II	11 <sup>th</sup>	1 hour	20
3	Assessment III (Assignment)	4 <sup>th</sup> , 10 <sup>th</sup> and 12 <sup>th</sup>		10
4	Assessment IV (Final Assessment)	13 <sup>th</sup>	3 hours	50

<sup>\*</sup>mandatory; refer to guidelines on page 4

COURSE EXIT SURVEY (mention the ways in which the feedback about the course shall be assessed)

Feed back will be collected from the students

#### COURSE POLICY (including compensation assessment to be specified)

Only one compensation assessment will be conducted at 10<sup>th</sup> week. Those who are unable to appear Assessment I and II under medical/genuine reasons, CPA is allowed.

The minimum passing percentage is 40%



## ATTENDANCE POLICY (A uniform attendance policy as specified below shall be followed)

- At least 75% attendance in each course is mandatory.
- A maximum of 10% shall be allowed under On Duty (OD) category.
- Students with less than 65% of attendance shall be prevented from writing the final assessment and shall be awarded 'V' grade.

#### ACADEMIC DISHONESTY & PLAGIARISM

ADDITIONAL INFORMATION, IF ANY

- Possessing a mobile phone, carrying bits of paper, talking to other students, copying from others during an assessment will be treated as punishable dishonesty.
- Zero mark to be awarded for the offenders. For copying from another student, both students get the same penalty of zero mark.
- The departmental disciplinary committee including the course faculty member, PAC chairperson and the HoD, as members shall verify the facts of the malpractice and award the punishment if the student is found guilty. The report shall be submitted to the Academic office.
- The above policy against academic dishonesty shall be applicable for all the programmes.

FOR APPROVAL		40/
11	HOD HOD	M
Course Faculty	HOD	