Mata kuliah: Transportation Management (TS 44006 / 4 sks

CAPAIAN PEMBELAJARAN MATA KULIAH Transportation Management:

- 1. Students understand the basic urban transport management and its key performance indicators (S, P2, KK3);
- 2. Students understand the aspects considered in public transport investment (S, P2, KK1);
- 3. Students understand how the city can be prepared for seamless human mobility (S, P2, KK1);
- 4. Students understand transport demand managmenet through electronic road pricing and transit oriented development (S, P2, KK1);
- 5. Students understand different approaches of traffic control and management (S, P2);
- 6. Students can analyze traffic data to represent certain models (S, KK1, KK2);
- 7. Students can apply shock wave theory into real trafffic situation (S, KK1, KK2);
- 8. Students can apply queueing theory into real world situation (S, KK1, KK2).



SEMESTER LEARNING PLAN (RPS)



UNIVERSITAS TARUMANAGARA FAKULTY OF ENGINEERING DEPARTMENT OF CIVIL ENGINEERING

SEMESTER COURSE PLAN (RPS)									
Course name			Course Code	Credits			Date of Production		
Transportation Management			TS 44006	4			15 November 2022		
Authorizationo			Cour	urse Leader Head of Research Groupo		Head of Department			
			Prof. Ir. Leksmono S.P., MT, Ph.D, IPM Prof. Ir. Leksmono S.P., MT, Ph.D, IPM		Dr. Daniel Christianto				
Learning Ourcomes	DEPARTN	IENT LEARNING (OUTCOMES (CPL/I	LO) ASSIGNED TO THE C	COURSE				
(CPL/LO)	S	Integrity: devoting to only one God with highly respect to humanity, integrity, moral, ethics, love the motherland. Professional: contributing in discipiline improvement, law obidience, quality of line, responsibility, longlife learning. Entrepreneurship: self-sufficiency, stugleness, entrepreneurship.							
P2 To understand planning, design, analysis, construction, operation, supervision, operation, maintenance, improvement, reinforcement and demolition process of civil engineering building considering safety, occupational health, efficiency a environment aspects.							nce, improvement/ nealth, efficiency and		

		Be able to id	entify all aspe	ects of civil en	gineering buil	ding based on	planning data	and drawings	with compre	hension of de	esign			
		principles, b	principles, be able to guide and choose various solution alternatives in civil engineering field.											
	KK1	Be able to pl	an, design, an	alyze, constru	ict, supervise,	operate, mai	ntain, improve	/ reinforce, ar	nd demolish ci	civil engineering building				
		using newes	t technology a	and software o	considering sa	fety, occupati	ional health, ef	ficiency and e	nvironment a	spects.				
		Be able to co	able to collect data, measure, test, investigate in the field, construction material test in laboratory and using management											
		concepts in o	ncepts in civil engineering design.											
	KK2	To understa	understand planning, design, analysis, construction, operation, supervision, operation, maintenance, improvement/											
		reinforceme	inforcement and demolition process of civil engineering building considering safety, occupational health, efficiency and											
		environmen	nvironment aspects.											
		Be able to id	entify all aspe	ects of civil en	gineering buil	ding based on	planning data	and drawings	with compre	hension of de	esign			
		principles, b	e able to guid	e and choose	various soluti	on alternative	s in civil engine	eering field.						
	ККЗ	Be able to pl	an, design, an	alyze, constru	ict, supervise,	operate, mai	ntain, improve	/ reinforce, ar	nd demolish ci	vil engineerir	ng building			
		using newes	t technology a	and software o	considering sa	ifety, occupati	ional health, el	ficiency and e	nvironment a	spects.				
		Be able to co	ollect data, me	easure, test, ir	nvestigate in t	he field, const	truction mater	ial test in labo	ratory and usi	ng managem	ent			
		concepts in a	civil engineeri	ng design.										
	COURSEL	EARINING OU		/IK/CLO)			<u> </u>							
	СРМК1	Understand	the basic urb	an transport r	nanagement	and its key pe	erformance ind	icators (S, P2,	, ккз.;					
	СРМК2	Understand	the aspects co	onsidered in p	ublic transpo	rt investment	(S, P2, KK1);							
	СРМКЗ	Understand	how the city c	an be prepar	ed for seamle	ss human mot	oility (S, P2, KK	1);						
	СРМК4	Understand	transport den	nand managm	enet through	electronic roa	ad pricing and	transit oriente	ed developme	nt (S, P2, KK1).			
	СРМК5	Understand	different appr	roaches of tra	ffic control an	d managemer	nt (S, P2);							
	СРМК6	Can analyze	traffic data to	represent ce	rtain models (S, KK1, KK2);								
	СМРК7	Can apply sh	ock wave the	ory into real t	rafffic situatio	on (S, KK1, KK2	<u>!);</u>							
	СРМК8	Can apply qu	leueing theor	y into real wo	rld situation (S, KK1, KK2).								
CPL-CPMK MAP	MATRIX C	PMK (CLO) TO) CPL (LO)											
	СР	S	KU1	KU2	KU3	P1	P2	KK1	KK2	ККЗ	TOTAL			
	СРМК1	2					13			9	24			
	СРМК2	1					5	3			9			
	СРМКЗ	1					5	4			10			
	СРМК4	1					4	3			8			
	СРМК5	1							7		8			

	СРМК6	1						6	5		12	
	СРМК7	1						7	7		15	
	CPMK 8	2						5	7		14	
	TOTAL	10	0	0	0	0	27	28	26	9	100	
Course Brief	In this course strudents learn the basic urban transport management and its key performance indicators, urban transport investment and											
Desctiption	fare, how the city can be prepared for seamless human mobility and transport demand managmenet through electronic road pricing and											
	transit oriented development. Stuents will also learn different approaches of traffic control and management, analyze traffic data to represent											
	certain models, apply shock wave theory into real trafffic situation and apply queueing theory into real world situation.											
Course Materials	1. Introduction: Explanation regarding lecture plan/lecture regulation/test and marking system, basic principles of urban transport system											
	and its	s key performa	ance indicator	5								
	2. Fixed a	and variable c	ost in public tr	ansport busin	less and fare o	determination	I.					
	3. How the	he city can be	prepared for s	seamless hum	an mobility.							
	4. Transp	port demand r	nanagmenet t	hrough electr	onic road pric	ing and transi	t oriented dev	elopment.				
	5. Differe	ent approache	s of traffic cor	ntrol and man	agement							
	6. Traffic	flow models.										
	7. Shock	wave theory.										
	8. Queue	eing theory.			_							
References	1	Law No. 22 Ye	ar 2009 on Ro	ad Traffic and	Transport.							
	2	Government F	Regulation No.	74 Year 2014	on Road Trai	nsport. 2014.			. – .			
	3	Government	Regulation No	. 80 Year 2012	2 on Procedur	e of on Road I	Motor Vehivle	e Inspection ar	nd Enfocemen	t on Road Tra	ffic and	
	Iransp	ort Law Viola	tion. 2012.									
	40	Government H	Regulation No.	55 Year 2012	on Vehicle.							
	5	(1997). Study	ON ADIIITY to H	ay (ATP) and	Willingness to	o Pay (WTP) of	f Jakarta Bus F	assengers. Ja	karta.			
	6. Penalo	osa, E. (2007).	Public Space	and Transpor	t for More So	cially and Envi	ironmentally	Sustainable Ci	ty. Jakarta.			
	7. VUCNIC	, V. (1981). U	rban Public Tr	ansport Sister	mand recnor	iology. Transmantation	-					
	8. Transp	port Agency of	Jakarta (2007		cro Patern of	i ransportatio	n. fartha Ctudu		al. DublicTrops	n ortation Dali		
	9. Directo	orate General	or Land Trans	port (2012). L	ratt Final Rep	ort of Project	for the Study	orjapodetabl	ek Publicirans	portation Poli	icy	
		nentation Stra		E Conorol Doc	oriesia (JAPTIC	IPIS).	iaat					
	11 Direkt	arai la Llu. (21 orat landeral	Bina Marga M	lanual Kanasit	tas lalan Indo	ai la IVIR I PIO nocia 1997	jeci.					
	12 Transn	orat Jenueral	arch Board Tu	anual Kapash		ring West Duk	1008					
	13 Putran	to I S Rekeve	asa Lalu Linter	(Fdisi 2) Den	erhit Indeks	akarta 2016	JI. 1990.					
	1/ Kicty I	C Lall K P Tr	ansportation F	ingingering A	n Introductio	n Drontico Ha	1008					
	12.Transp 13.Putran 14.Kistv.J.	oortation Resento. L.S.Rekaya .CLall. K.B.Tr	arch Board. Ti asa Lalu Lintas ansportation E	affic and High (Edisi 3), Pend Ingineering: A	nway Enginee erbit Indeks, J In Introductio	ring, West Puk akarta. 2016. n. Prentice Ha	ol. 1998. III. 1998					

		15.Gerlou	gh, D.L., Huber, M.J.Traffic Flow Th	Research Board. 1975.						
Supporti	Supporting Learning				Hardwares :					
Medias		-	Speed gun, traffic counter, stop watch, meteran, kamera video, lapto							
Lecturers	5	Prof. Ir. Le	ksmono Suryo Putranto, MT., Ph.D							
		Dr.Ir.Najid	, MT.							
Pre-requi	isite courses	-								
(if any)			1	1		Γ				
Weeks	Learning Outcomes		Course Materials	Achievement Indicators		Learning Method	Time Allocation	References	Assessments & Forms	
(1)	(2	2)	(3)	(4)		(5)	(6)	(7)	(8)	
1-2	Can unders	tand the	Introduction:	Accuracy in explainin	g basic	Method:	L:2x2x50'	1 up to 10	Lecture	
	basic urban	transport	Explanation on Semesterly	principles of urban tr	ansport	Interactive,	SA:2x2x60'		25%	
	manageme	nt and its Lecture Plan / lecture		system and its key		holistic,	IA: 4 x60'			
	key perform	nance	regulation/ test and marking	performance indicate	ors.	integrative,				
	indicators [C3, C4, C5]	system.			scientific,				
			Basic principles of urban			contecstual,				
			transport system its key			thematic,				
			performance indicators			effective,				
						collaborative				
						and student				
						centered				
						learning				
3	Can unders	tand the	Fixed and variable costs in	Accuracy in explainin	g the	Method:	L: 2 x50'	1 up to 10	Lecture	
	aspects con	sidered in	public transport business	aspects considered in	n public	Interactive,	SA:2x60'		8%	
	public trans	port	Method of fare	transport investment		holistic,	IA: 2 x60'			
	investment	[C3, C4,	determination (Transport			integrative,				
			agency/BEP)			scientific,				
			ATP and WTP concepts			contecstual,				
			Subsidy and service			thematic,				
			improvement.			effective,				
						collaborative				

				and student			
				centered			
				learning			
4-5	Can understand how	Cars vs people	Accuracy in explaining how	Method:	L:2x2x50'	1 up to 10	Lecture
	the city can be	Pedestrian and bicycle street	the city can be prepared for	Interactive,	SA:2x2x60'		7%
	prepared for seamless	network	seamless human mobility	holistic,	IA: 4 x60'		
	human mobility [C3,	• Sidewalk and bikeshare as	public transport service	integrative,			
	C4,C5]	part of transit system		scientific,			
		Car use restriction		contecstual,			
		Car free day		thematic,			
		Bus Lane		effective,			
				collaborative			
				and student			
				centered			
				learning			
6-7	Can understand	• Electronic road pricing (ERP)	Accuracy in explaining	Method:	L: 2 x50'	1 up to 10	Lecture
	transport demand	Transit oriented	transport demand	Interactive,	SA:2x60'		16%
	management through	development (TOD)	management through	holistic,	IA: 2 x60'		
	electronic road pricing		electronic road pricing and	integrative,			
	and transit oriented		transit oriented development	scientific,			
	development [C3,			contecstual,			
	C4,C5]			thematic,			
				effective,			
				collaborative			
				and student			
				centered			
				learning			
8	Mid Semester Test						
9	Can understand	Traffic supply management	Accuracy in analyzing traffic	ddddddddd	L: 2 x50'	11 upto 14	Lecture
	different approaches	Traffic demand management	data to represent certain		SA:2x60'		8%
	of traffic control and		models		IA: 2 x60'		

	management [C3, C4,C5]						
10-11	Can analyze traffic data to represent certain models [C3, C4,C5]	 Underwood model IHCM-Greenshields modified model 	Accuracy in applying shock wave theory into real traffic situation	Method: Interactive, holistic, integrative, scientific, contecstual, thematic, effective, collaborative and student centered learning	L: 2 x50' SA:2x60' IA: 2 x60'	11 upto 14	Lecture 12%
	Can apply shock wave theory into real trafffic situation [C3, C4,C5]	Shock wave theory	Accuracy in applying queueing theory into real world situation	Method: Interactive, holistic, integrative, scientific, contecstual, thematic, effective, collaborative and student centered learning	L: 2 x50' SA:2x60' IA: 2 x60'	11 upto 14	
12-14	Can apply queueing theory into real world situation [C3, C4,C5]	Queueing theory	Accuracy in explaining basic principles of urban transport system and its key performance indicators.	Method: Interactive, holistic, integrative, scientific,	L:3x2x50' SA:3x2x60' IA: 43x60'	11 upto 14	Lecture 12%

				contecstual, thematic, effective, collaborative and student centered learning			
15	Can understand different approaches of traffic control and management [C3, C4,C5]	 Traffic supply management Traffic demand management 	 Accuracy in explaining the aspects considered in public transport investment 	Method: Interactive, holistic, integrative, scientific, contecstual, thematic, effective, collaborative and student centered learning	L: 2 x50' SA:2x60' IA: 2 x60'	11 upto 14	Lecture 15%
16	Final Semester Test (UA	AS)	•		•		