

Department of Civil and Environmental Engineering

AY 2021-22 MASTER'S DEGREE PLAN OF STUDY TRANSPORTATION SYSTEMS

Name:	Student ID Number:
Qrt/Year Expected to Advance to Candidacy:	Email Address:
Qrt/Year Expected to Graduate:	GPA:
Thesis or Non-Thesis Option:	Thesis Advisor:

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COURSE TITLE	COURSE Number	UNITS	GRADE	QTR/ YR	NON-THESIS OPTION: 48 Units Total	THESIS OPTION: 48 Units Total
Travel Demand Analysis I	CEE 220A	4			Core Courses: 28 units	Core Courses: 28 units
Transportation Systems Analysis I	CEE 221A	4			Students must fulfill a minimum of 28 units made up of the core courses listed to the left and below:	Students must fulfill a minimum of 28 units made up of the core courses listed to the left and below:
Urban Transportation Networks I	CEE 228A	4				
Mathematical Methods in Engineering Analysis	CEE 283	4			The remaining core courses (at least 3) may be chosen from the following:	The remaining core courses (at least 3) may be chosen from the following:
					CEE 223 CEE 224A CEE 226A or 226B CEE 229A or 229B	CEE 223 CEE 224A CEE 226A or 226B CEE 229A or 229B
TOTAL UNITS FOR THIS	SECTION:					
COURSE TITLE	COURSE	UNITS	GRADE	QTR/ YR	Electives: 12 out of 48 Units Students must fulfill a minimum of 12 elective units from graduate	MS Research: 10 out of 48 Units Students can fulfill a minimum of 10 units of CEE 296: MS Thesis
					courses listed on page 2.	Research.
TOTAL UNITS FOR THIS	SECTION:	1				
COURSE TITLE	COURSE	UNITS	GRADE	QTR/ YR	Seminars/Other (8 out of 48 Units)	Seminars/Other (10 out of 48 Units)
					Required: 3 units of CEE 295: Seminars in CEE (Max. of 3 units apply to degree requirements).	Required: 3 units of CEE 295: Seminars in CEE (Max. of 3 units apply to degree requirements).
					Options for the remaining 5 units: 1. Approved graduate-level courses (see page 2)	Options for the remaining 7 units: 1. Approved graduate-level courses (see page 2)
TOTAL UNITS FOR THIS SECTION:				2. CEE 299 Individual Research units 3. Approved upper-division	2. CEE 299 Individual Research units3. Approved upper-division	
TOTAL UNITS OF ALL S	SECTIONS:	-			undergraduate units (max. 10 units)	undergraduate units (max.10 units)

SIGNATURES:		MS THESIS COMMITTEE MEMBERS:	
CANDIDATE:	DATE:	CHAIR:	
FOCUS AREA FACULTY ADVISOR:	DATE:	MEMBER:	
CEE GRADUATE ADVISOR:	DATE:	MEMBER:	

Note: This form must be submitted to the Grad. Coordinator by the end of the FIRST quarter of enrollment. Changes to this form must be approved by the Faculty Graduate Advisor, Professor R. (Jay) Jayakrishnan: rjayakri@uci.edu

CEE Courses:	Non-CEE Courses (Electives Cont.):
ENGRCEE 214 GIS for CEE (F) ¹	ECON 243A Game Theory
ENGRCEE 220A Travel Demand Analysis I (F)	ECON 243B Advanced Game Theory
ENGRCEE 220B Travel Demand Analysis II (*)	ECON 281A Urban Economics
ENGRCEE 220C Travel Demand Analysis III (S)	ECON 281B Urban Economics II
ENGRCEE 221A Transportation Systems Analysis I (F)	ECON 282A Transportation Economics I
ENGRCEE 221B Transportation Systems Analysis II (S)	ECON 282B Transportation Economics II (S18)
ENGRCEE 222 Transit Systems Planning (*)	EECS 215 Design and Analysis of Algorithms
ENGRCEE 223 Transportation Systems Planning (S)	EECS 227 Cyber-Physical System Design
ENGRCEE 224A Transportation Data Analysis I (W)	EECS 240 Random Processes
ENGRCEE 225A Transportation Planning Models I (*)	EECS 242 Information Theory
ENGRCEE 225B Transportation Planning Models II (*)	EECS 260A Linear Systems I
ENGRCEE 226A Traffic Flow Theory I (*)	ENGR 280 Entrepreneurship for Scientists and Engineers
ENGRCEE 226B Traffic Flow Theory II (*)	MGMTMBA 208 Operations Management
ENGRCEE 228A Urban Transportation Networks I (W)	MGMTMBA 285 Supply Chain Management
ENGRCEE 228B Urban Transportation Networks II (S)	MGMTPHD 297Q Game-Theoretic Models for Mgmt Research
ENGRCEE 229A Traffic Systems Operations & Control I (W)	MGMTPHD 297T Decision Theory
ENGRCEE 229B Traffic Systems Operations & Control II (*)	MATH 225B Intro to Numerical Anal. & Scientific Computing
ENGRCEE 283 Mathematical Methods in Eng. Analysis (F)	ENGRMAE 206 Nonlinear Optimization Methods
ENGRCEE 290 Merging Models and Data (S)	ENGRMAE 214A Fuel Cell Fundamentals and Technologies
ENGRCEE 296 MS Thesis Research (F,W,S)	UPPP 202 History of Urban Planning
ENGRCEE 298 Smart Cities (F)	UPPP 207 Land-Use Law
ENGRCEE 299 Individual Research (F,W,S)	UPPP 231 Transportation and Environmental Health
Non-CEE Courses (Electives): Please check	UPPP 235 GIS Problem Solving in Planning ¹
,	UPPP 244 Land-Use Policy
individual Department schedules to confirm course	PUBHLTH 260 Human Exposure Modeling
offerings.	SOCECOL 272A Structural Equation Modeling I
CRM/LAW C207 Land Use Law	STATS 245 Time Series Analysis
BANA 212 Data and Programming for Analytics	STATS 260 Inference with Missing Data
BANA 295 Big Data Management Systems	STATS 262 Theory and Practice of Sample Surveys
COMPSCI 206 Principles of Scientific Computing	STATS 270 Stochastic Processes
COMPSCI 244P Introduction to the Internet of Things	
COMPSCI 261 Data Structures	
COMPSCI 268 Introduction to Optimization Modeling	
COMPSCI 273A Machine Learning	
COMPSCI 274C Neural Networks and Deep Learning	
EARTHSS 212 Geoscience Modeling and Data Analysis	

Key:

(F): Fall Quarter; (W): Winter Quarter; (S): Spring Quarter; (*): Not offered in 2021/2022

NOTE: The following can **ONLY** be included with **prior** approval of the Graduate Advisors/Director.

- 1) Upper-division undergraduate courses and/or Non-CEE graduate courses (outside of those listed above). Include a description of the course in your email request to Professor R. (Jay) Jayakrishnan: rjayakri@uci.edu.
- 2) MS Thesis Research units can be extended to 16 units. Include email approval from Thesis Advisor in request to Professor Russell Detwiler: detwiler@uci.edu.

^{1:} Students can count either CEE 214 (GIS) or PPD 235 (GIS) toward degree requirement, <u>BUT NOT BOTH.</u>