

MASTER OF PUBLIC WORKS (INFRASTRUCTURE ENGINEERING AND MANAGEMENT)

The Master of Engineering in Public Works (M.P.W.) degree is the most widely recognized educational credential for professionals engaged in public works and infrastructure engineering and management. The M.P.W. program consists of four core courses, five to six elective courses, and one CAE 597 or CAE 594 special problems course (up to four credit hours). The elective courses should be selected in consultation with the student's adviser. This program is offered in cooperation with the university's Master of Public Administration program.

Curriculum

Code	Title	Credit Hours
Core Courses		(12)
CAE 574	Economic Decision Analysis	3
CAE 575	Systems Analysis in Civil Engg	3
PA 501	Introduction to Public Admin	3
PA 551	Public Infrastructure Mgmt	3
Electives		(17-18)
Select 17-18 credit hours (see recommended courses below)		17-18
CAE Special Problems Course		(1-3)
CAE 594	Research Problems	1-3
or CAE 597	Special Problems	

Minimum degree credits required: 32

Recommended Elective Coursework by Subject

Construction Management

Code	Title	Credit Hours
CAE 470	Constrctn Methods&Cost Estmg	3
CAE 471	Construction Plan & Scheduling	3
CAE 472	Construction Site Operation	3
CAE 473	Construction Contract Admin	3

Geotechnical Engineering

Code	Title	Credit Hours
CAE 482	Hydraulic Dsgn Open Chnrl Syst	3
CAE 486	Soil Site Improvement	3
CAE 562	Engineering Behavior of Soils	4
CAE 564	Foundations/Embankments/Earth	4
CAE 565	Rock Mechanics and Tunneling	4
CAE 566	Earthquake Engg/Soil Dynamics	4
CAE 589	Groundwater Hydrology/Sampling	3
CAE 590	Geotechnical Landfill Design	3
ENVE 404	Water & Wastewater Engineering	3
ENVE 551	Industrial Waste Treatment	3

Public Administration - Administration Process

Code	Title	Credit Hours
PA 502	Organizational Behavior	3
PA 503	Administration Law	3
PA 522	Human Resource Management	3
PA 532	Public Financial Management	3
PA 533	Adv Financial Management	3

Public Administration - Policy Planning

Code	Title	Credit Hours
PA 537	Crisis Mgmt/Homeland Security	3
PA 538	Info Syst Security/Cyber Crime	3
PA 539	Local Government Mgmt	3
PA 562	Urban and Metropolitan Gov	3
PA 578	Plan,Policy Making&Bult Envir	3
PA 588	Incident Rspnse Disaster Rcvry	3

Structural Engineering

Code	Title	Credit Hours
CAE 504	Seismic Retrofit/Earthquake	4
CAE 506	Building Env Rehab Engineering	3
CAE 508	Advanced Bridge Engineering	3
CAE 518	Advanced Reinforced Concrete	3
CAE 520	Buckling of Structures	4
CAE 525	Advd Steel&Composite Structure	4
CAE 551	Prestressed Concrete	3

Transportation Engineering

Code	Title	Credit Hours
CAE 419	Intro Transportation Engg/Dsgn	3
CAE 523	Statistical Analysis Engg Data	3
CAE 540	Asphalt Concrete Mix Design	3
CAE 541	Pavement Evaluation&Management	3
CAE 544	Urban Transportation Planning	4
CAE 545	Traffic Operations & Flow Thry	3
CAE 546	Public Transportation Systems	3
CAE 547	Advanced Traffic Engineering	3
CAE 548	Transportation Systems Mgmt	3
CAE 549	Transportation Econ, Dev&Plcy	3
CAE 555	Transportation Sysys Evaluatio	3
CAE 568	Transportation Asset Mgmt	3
CAE 574	Economic Decision Analysis	3
CAE 580	Intelligent Transport Systems	3
CAE 581	Algorithms in Transportation	3
MATH 522	Mathematical Modeling	3
MATH 525	Statistical Models and Methods	3
MATH 542	Stochastic Processes	3
MATH 563	Mathematical Statistics	3
MATH 564	Applied Statistics	3
MATH 565	Monte Carlo Methods in Fin	3
MATH 571	Data Preparation and Analysis	3
MATH 574	Bayesian Computational Stats	3