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Courses in land surveying and mapping - minimum 16 credits of PLS classes to sit for initial Land Surveying licensing exam, inc a course in survey law.

Civil Engineering 2016-2017 Technical Elective Class List

Course	Title	Pre-requisite or *Co-requisite Class(es)	Credits	F2016	W2017	Sp2017	Su2017
CCE 422/522	Green Building Materials	CCE 321, ECON 201 & ST 314	3		Ideker	Ideker (e-campus)	
CCE 520 (Condition)	Selected Topics: Condition Assessment & Repair of Road Conditions		4			Isgor	
CCE 520 (Corrosion)	Selected Topics: Corrosion		4		Isgor		
CCE 520 (Adv. Pavement)	Selected Topics: Advanced Pavement Materials		3		Coleri		
CCE 525	Construction Site Systems Engineering	Graduate Standing or Instructor Consent	3			Gambatese	
CCE 526	Design for Safety	Graduate Standing or Instructor Consent	3	Gambatese			
CCE 529	Lean Construction		3		Louis		
CE 365	Highway Location & Design	CE 361	3		Schultz		
CE 403	Thesis	Instructor Consent	1-3cr	Staff	Staff	Staff	Staff
CE 405	Projects: Big Beam	CE 486 & Instructor Consent	1			Kaufman	
CE 405	Projects: Steel Bridge	Instructor Consent	1			Miller	
CE 405	Projects: Concrete Canoe	Instructor Consent	1			Miller	
CE 407 (Water Resources)	Seminar: Water Resources Issues		1	Santelmann			
CE 411/511	Ocean Engineering	CE 313 or CEM 311	4	Yeh			
Course	Title	Pre-requisite or *Co-requisite Class(es)	Credits	F2016	W2017	Sp2017	Su2017
CE 413/513	GIS in Water Resources	Senior Standing & CE 202 or other GIS course	3		Arras		Staff
CE 417/517	Hydraulic Engineering Design	CE 313	4		Yeh		
CE 424/524	Contracts and Specifications	Phase II of Registration with Instructor Consent	4		Turkan	Staff	
CE 427/527	Temporary Construction Structures	CE 383, CE 372, & CCE 321, in Phase II of Registration with Instructor Consent	4		Gambatese	Martin	
CE 461/561	Photogrammetry	CE 361 or CEM 263 or FE 308 (PLS class)	3	Schultz			
CE 463/563	Control Surveying	CE 361 or CEM 263 or FE 308 (PLS class)	4			Schultz	
CE 465/565	Oregon Land Survey Law	CE 361 or CEM 263 or FE 308 (PLS class)	3		Schultz		
CE 469/569	Property Surveys	CE 361 or CEM 263 or FE 308 (PLS class)	3			Schultz	
CE 471	Foundations for Structures	CE 373 or FE 316	3		Evans		
CE 482/582	Masonry Design	CE 481 or equivalent	3		Wallace		
CE 484/584	Wood Design	CE 383 or CE 481 & senior standing	4		Martin		
CE 486/586	Prestressed Concrete	CE 481	3		Kaufman		
CE 492/592	Pavement Structures	CE 392	3			Coleri	
CE 505 (Geodesy)	R&C: Fundamentals of Geodesy in Civil Engineering	Graduate Standing or Instructor Consent	4			Park	
CE 505 (Least Squares)	R&C: Geomatics: Least Squares Adjustments		3		Gillins		
CE 505 (Coastal)	R&C: Coastal Remote Sensing		3		Parrish		
CE 505 (Surv. Engr. Auto.)	R&C: Surveying Engineering Automation		3			Gillins	
Course	Title	Pre-requisite or *Co-requisite Class(es)	Credits	F2016	W2017	Sp2017	Su2017
CE 506 (Facility Design)	Projects: Facility Design		3			KHZ	
CE 514	Groundwater Hydraulics	CE 313 & MTH 252	4		Istok		
CE 532	Finite Element Analysis	CE 585 or Instructor Consent	4		Yim		
CE 533	Structural Stability	CE 383 & Instructor Consent	3			Miller	
CE 534	Structural Dynamics	CE 382 & Instructor Consent	4		Borello		

CE 537	NonLinear Structural Analysis	CE 585 or Instructor Consent	4			Staff	
CE 540 (Optimization)	Selected Topics: Optimization in Water Resources	Graduate Standing or Instructor Consent	3			Babbar-Sebens	
CE 540 (Stochastic)	Selected Topics: Stochastic Hydrology	Graduate Standing or Instructor Consent	3			Babbar-Sebens	
CE 547	Water Resources Engineering I: Principles of Fluid Mechanics	Graduate Standing or Instructor Consent	4	Istok			
CE 552	Isolated Signalized Intersections	CE 595 recommended	3			Hurwitz	
CE 560 (GNSS & Geodesy)	ST: GNSS & Geometric Geodesy		3	Park			
CE 560 (Hydrographic Surv.)	ST: Hydrographic Surveying		3	Parrish			
CE 562	Digital Terrain Modeling	CE 361 or CEM 263 or equivalent Surveying or GIS class (PLS Class)	4			Olsen	
CE 566 (3D Laser)	3D Laser Scanning & Imaging		4	Olsen			
CE 570	Selected Topics: Geomechanics	CE 373 & CE 471 or Instructor Consent	3			Evans	
Course	Title	Pre-requisite or *Co-requisite Class(es)	Credits	F2016	W2017	Sp2017	Su2017
CE 571	Advanced Foundation Engineering	CE 373 & CE 471 or Instructor Consent	4			Stuedlein	
CE 572	Advanced Geotechnical Laboratory	CE 373 and CE 471 or Instructor Consent	4	Evans			
CE 575	Earth Retention & Support	CE 373	4			Staff	
CE 576	Soil and Site Improvement	CE 572 & CE 577 or Instructor Consent	3			Stuedlein	
CE 577	Static & Dynamic Soil Behavior	CE 372 & CE 373		Mason			
CE 578	Geotechnical Earthquake Engineering	CE 373 & CE 471 or Instructor Consent	4	Mason			
CE 580 (Advanced Steel)	Selected Topics: Advanced Steel Design		3			Borello	
CE 580 (Performance Based)	Selected Topics: Performance Based Seismic Design		3			Barbosa	
CE 580 (Structural Systems)	Selected Topics: Structural Systems	Graduate Standing or Instructor Consent	3			Liu	
CE 585	Matrix Structural Analysis	CE 382	4	Scott			
CE 589	Seismic Design	CE 383 or CE 481, and Instructor Consent	4	Miller			
CE 590	Selected Topics: Agent-Based Modeling		3			Wang	
CE 590	Selected Topics: Network Flow Analysis & Optimization	Senior Standing	3	Hernandez			
CE 591	Transportation System Analysis, Planning, & Policy	Graduate Standing or Instructor Consent	3			Wang	
CE 594	Transportation Facility Design	CE 392	4			KHZ	
Course	Title	Pre-requisite or *Co-requisite Class(es)	Credits	F2016	W2017	Sp2017	Su2017
CE 595	Traffic Operations and Design	*CE 491	3	Hurwitz			
CE 597	Public Transportation		3	KHZ			
CEM 341	Construction Estimating I	CE 102 & CCE 201, in Phase II of Registration with Instructor Consent	4			Fradella	
CEM 441	Heavy Civil Construction Management	FE 315 or CE 372, in Phase II of Registration with Instructor Consent	4			Louis	
CEM 442	Building Construction Management	Phase II of Registration with Instructor Consent	4	Sillars			
CEM 471	Electrical Facilities	Phase II of Registration with Instructor Consent	4	Fradella			
CEM 472	Mechanical Facilities	Phase II of Registration with Instructor Consent	3			Fradella	
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