

CE Program Learning Outcome	Course Used for Outcome Assessment	Semesters by Academic Year							
		F14	S15	F15	S16	F16	S17	F17	S18
<i>The following assessment measures have a minimum acceptable achievement rate of 80%.</i>									a1-a4 are 70%
a: ability to apply knowledge of mathematics, science, and engineering, including ...									
a1: math through diff. eqns.	MATH 260 Differential Equations	85.7%	76.9%	75.0%	77.8%	74.1%	64.3%	87.9%	
a2: calculus-based physics	PHYS 204A Mechanics	56.5%	84.4%	67.9%	73.1%	82.4%	78.6%	86.4%	
a3: chemistry	CHEM 111 General Chemistry	73.3%	87.5%	92.9%	54.8%	66.7%	80.6%	82.4%	
a4: biology	CIVL 175 Bio. Proc. In Envir. Engr.	83.3%	94.4%	84.3%	95.6%	98.0%	100.0%	93.4%	
a5: at least four technical areas appropriate to civil engineering:									
<i>structural engineering</i>	CIVL 415 Reinforced Concrete Design	92.7%	86.4%	74.5%	100.0%	100.0%	100.0%	100.0%	
<i>environmental engineering</i>	CIVL 431 Environmental Engineering		93.1%		91.4%		98.6%		
<i>transportation engineering</i>	CIVL 441 Transportation Engineering	96.6%		98.4%		100.0%		100.0%	
<i>water resource engineering</i>	CIVL 461 Water Resource Engineering		73.1%		91.0%		85.0%		
<i>The following assessment measures have a minimum acceptable achievement rate of 90%.</i>									
b: ability to design and conduct experiments, as well as to analyze and interpret data	CIVL 415 Reinforced Concrete Design	97.6%	100.0%	86.2%	100.0%	100.0%	100.0%	100.0%	
	CIVL 441 Transportation Engineering	95.2%		100.0%		100.0%		100.0%	
c: ability to design a system, component or process to meet desired needs	CIVL 461 Water Resource Engineering		44.4%		93.0%		95.0%		
	CIVL 558C Eq. & Wind Engr. - Caps.		96.4%			100.0%	66.7%		
	CIVL 561C Hydro. & Open Ch. - Caps.			100.0%		100.0%		100.0%	
	CIVL 562C Ground. Hydro. - Caps.	100.0%			100.0%				
	CIVL 571C Nat. Sys. Waste. Tr. - Caps.	100.0%						92.9%	
	CIVL 586C Adv. Transp. Engr. - Caps.		100.0%		100.0%		100.0%		
d: ability to function on multi-disciplinary teams	CIVL 495 Lifelong Dev. for Engineers	100.0%	100.0%	100.0%	100.0%	96.9%	100.0%	100.0%	
	CIVL 595 Capstone Design Project	100.0%	100.0%	100.0%	100.0%	100.0%	97.6%	100.0%	
e: ability to identify, formulate, and solve engineering problems	CIVL 441 Transportation Engineering	95.2%		100.0%		100.0%		100.0%	
	CIVL 558C Eq. & Wind Engr. - Caps.		96.3%			95.5%	96.7%		
	CIVL 561C Hydro. & Open Ch. - Caps.			100.0%		100.0%		100.0%	
	CIVL 562C Ground. Hydro. - Caps.	100.0%			100.0%				
	CIVL 571C Nat. Sys. Waste. Tr. - Caps.	100.0%						92.9%	
	CIVL 586C Adv. Transp. Engr. - Caps.		100.0%		100.0%		100.0%		
f: understanding of professional and ethical responsibility	CIVL 495 Lifelong Dev. for Engineers	100.0%	100.0%	100.0%	100.0%	99.0%	100.0%	80.0%	
	CIVL 595 Capstone Design Project	100.0%	100.0%	100.0%	100.0%	80.8%	100.0%	100.0%	
g: ability to communicate effectively	CIVL 595 Capstone Design Project	100.0%	100.0%	100.0%	100.0%	84.6%	100.0%	100.0%	
	CIVL 558C Eq. & Wind Engr. - Caps.		96.4%			90.9%	93.3%		
	CIVL 561C Hydro. & Open Ch. - Caps.			100.0%		100.0%		100.0%	
	CIVL 562C Ground. Hydro. - Caps.	100.0%			100.0%				
	CIVL 571C Nat. Sys. Waste. Tr. - Caps.	90.0%						92.9%	
	CIVL 586C Adv. Transp. Engr. - Caps.		100.0%		100.0%		100.0%		
h: broad education necessary to understand impact of engineering solutions in a global and societal context	CIVL 431 Environmental Engineering		94.8%		84.5%		97.1%		
	CIVL 495 Lifelong Dev. for Engineers	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	83.3%	
i: recognition of the need for, and an ability to, engage in lifelong learning	CIVL 495 Lifelong Dev. for Engineers	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	93.3%	
j: knowledge of contemporary issues	CIVL 495 Lifelong Dev. for Engineers	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	90.0%	
	CIVL 595 Capstone Design Project	100.0%	100.0%	100.0%	100.0%	92.3%	100.0%	100.0%	
k: ability to use techniques, skills, and modern engineering tools for engineering practice	CIVL 461 Water Resource Engineering		72.0%		93.0%		86.7%		
	CIVL 558C Eq. & Wind Engr. - Caps.		96.4%			100.0%	66.7%		
	CIVL 561C Hydro. & Open Ch. - Caps.			100.0%		100.0%		100.0%	
	CIVL 562C Ground. Hydro. - Caps.	100.0%			100.0%				
	CIVL 571C Nat. Sys. Waste. Tr. - Caps.	100.0%						92.9%	
	CIVL 586C Adv. Transp. Engr. - Caps.		100.0%		100.0%		100.0%		
l: understanding of basic concepts in management, business, public policy, and leadership	CIVL 495 Lifelong Dev. for Engineers	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	76.7%	
	CIVL 595 Capstone Design Project	100.0%	100.0%	100.0%	100.0%	80.8%	100.0%	100.0%	