

NORTH DAKOTA STATE UNIVERSITY							
TECHNICAL ELECTIVES OFFERED BY DEPT OF CIVIL & ENVIRONMENTAL ENGINEERING							
Area	Fall 21	CR DS		Spring 22	CR	DS	
All Areas*	CE 493 Undergraduate Research	TBD		CE 493 Undergraduate Research	TBD		
Structures	CE 441/641 Finite Element Analysis	3	1.0	CE 411/611 Prestressed Concrete	2	1.0	
	CE 446/646 Basic Dynamics of Structures	3	1.0	CE 425/625 Bridge Evaluation & Rehabilitation	3	1.5	
				CE 430/630 Timber & Form Design	3	1.5	
Water Resources	CE 477/677 Applied Hydrology	3	1.5	CE 421/621 Open Channel Flow	3	1.5	
Environmental	CE 410/610 Water & Wastewater Engineering	3	1.5	CE 494 Environmental Engineering Design	3	2.0	
	CE 472/672 Solid Waste Management	3	1.5				
Transportation	CE 454/654 Geometric Highway Design	3	2.0	CE 419/619 Pavement Design	3	1.5	
	CE 456/656 Railroad Planning & Design	3	1.5				
Geotechnical	CE 461/661 Foundation Engineering	3	1.5	CE 462/662 Designing w/ Geosynthetics	2	1.0	
	CE 464/664 Advanced Soil Mechanics	2	1.0				
Advanced Materials	CE 725 Biomaterials	3	0.0	CE 486/686 Fundamentals of Nanotechnology	3	0.0	
	CE 491/690 Multi-Scale Modeling of Materials (Class 5746 - Undergraduate) (Class 5747 - Graduate)	3	1.0				

NOTES:

DS indicate design credits. Six of the 12 credits of technical must be design credits.

Of the 12 credits in technical electives, at least one course each must be selected from 3 of the six areas shown above.

Course offering listed are subject to student and staff availability.

*CE 493 requires prior approval by the selected faculty mentor and the completion of the technical elective approval form.

Updated 10/05/21 MS

ABOVE SUBJECT TO MINOR CHANGES!!!