

Green Technology Curriculum CIP CODE # 150507 Environmental Engineering Technology/Environmental Technology

NYSED CTE Approved for Endorsement - 2014, Reapproval 6/2018

*Students are required to take ½ credit of the NYSED mandated Career & Financial Management (CFM) curriculum (Course #CF01G)) and a ½ credit of the CTE course specific CFM curriculum (Course #CF02G)).

Grade	Course #	Units Taught	Hours of Instruction	CCLS ELA	CCLS Math	
10	DD01G	1	Introduction to Drafting	3	RST 2,3,4,10;SL 1,4;W2;L 1,2	
		2	General Safety	3	RST 2,4,7,10;SL 1,4;W2;L 1,2	SIC2,6; SMD7
		3	Introduction to Basic Tools and Materials	5	RST 2,3,4,10; SL 4;W2;L 1,2	
		4	Measurement	6	RST 2,4,7,10;W 2,4;L 1,2	NQ1-; NRN 1-3
		5	Orthographic Projection	24	RST 2,4,7,10;W2,4;L 1,2	GGMD1-4; GMG 1-3
		6	Dimensioning Procedures	12	RST 2, 4,10; W 2,4;L 1,2	NQ 1-3; ACE 1,2; AAPR1
		7	Sheet Model Layout and Development	6	RST 2, 3, 4,10; W 4;L 1,2	NQ1-3; ACE 1,2; AAPR1
		8	Pictorial Drawings	22	RST 2,3,4,10; W 4;L 1,2	CGC01; GGPE4-7; NQ1-3
		9	Decimals	4	RST 2,4,7,10;W 2,4;L 1,2	AAPR 6,7; ARE 1,2
		10	Geometric Construction	10	RST 2,3,4,7,9,10;L 1,2;SL 2,4; W 2,4	GC 3,4
		11	Layouts and Assembly Drawings	6	RST 2,3,4,7,9,10;L 1,2;SL 2,4; W 2,4	NQ 1-4
		12	Sectional Views	12	RST 2,3,4,7,9,10;L 1,2;SL 2,4; W 2,4	GMD 4
		13	Fasteners and Hardware	6	RST 2,3,4,7,9,10;L 1,2 ;SL 2,4; W 2,4	
		14	Working Drawings - Architecture	14	RST 2,3,4,7,9,10;L 1,2;SL 2,4; W 2,4	NQ 1-3; ACE 1,2; AAPR1
				15	Electrical Drafting Techniques	2
			TOTAL	135		
Green Tech 11	GT03M	1	Classroom Policy and Procedures	3	RST 2,4;W 2;L 1,2; SL 1,2	
		2	Public Speaking & Presenting	10		
		3	Lab Safety	4	RST 2,4,7;SL 1,4;W2;L 1,2	
		4	Hand Tools	3	RST 2,3,4; SL 4;W2;L 1,2	SID9; SIC6
		5	Machine Operation	4	RST 2,3,4; SL 4;W2;L 1,2	NQ1-3; GC 1-5; GGMD1-4; GMG 1-3
			Green Technology Pre-Requisite			
		6	Resources and Damaging the Environment	6	RST 2,3,4,7-9;L 1,2; SL 1,2; W 2,4	
		7	Fossil Fuels, the Greenhouse Effect & Climate Change	10	RST 2,3,4; L 1,2; SL 1,2; W 2	
		8	Designing Energy Solutions	6	RST 2,3,4,7-9; L 1,2; SL 1,2; W 2,4,6-8	
			Alternative energy			SID 2,3,6,7; SIC 1,6
		9	Introduction to Energy	4	RST 2-4; L 1,2; SL 1,2; W 2	
		10	Energy Types and Electricity	6	RST 2-4; L 1,2; SL 1,2; W 2,4	
		11	Energy,the Environment & Hydropower	6	RST 2-4,8; L 1,2; SL 1,2; W 2	FIF 1,2,4-9; FBF 1; FLE 1-5; GC 1-5; FPE 1-5;
		12	Geo Thermal Energy	6	RST 2-4,7,9; L 1,2; SL 1,2; W 2,4	FTF 1-6
13	Wind Energy	12	RST 2-4; L 1,2; SL 1,2; W 2,4			
14	Solar Energy, Solar Power & Careers	6	RST 2-4,7-9; L 1,2; SL 1,2; W 2,4,6,7	GGPE 2,3; FIF 1,2, 4-9; FBF 1; FLE 1-5; FTF 5,6		

		15	Nuclear Energy	6	RST 2-4,7-9; L 1,2; SL 1,2; W 2,4,6,7	FBF 1,4; FLE 1-5
		16	Other Types of Alternative Energy	8	RST 2-4; L 1,2; SL 1,2; W 2	
			Green Transportation			
		17	The History of Transportation	4	RST 2-4,7-9; L 1,2; SL 1,2; W 2,4,6,7	ASSE4; FIF3; GCO1; NQ1-3;
		18	Drilling & Refining Oil & Internal Combustion Engine	8	RST 2-4,7-9; L 1,2; SL 1,2; W 2,4,6,7	ACED2; ASSE1-3; FIF4; GGMO3; NQ1-3;
		19	Hydrogen, Electrolysis & Electric Vehicles	8	RST 2-4, 7-9; L 1,2; SL 1,2; W 2,4	NQ1-3
		20	Hybrid Vehicles, Transmissions & Hybrid Disadvantages	8	RST 2-4; L 1,2; SL 1,2; W 2	
		21	Alternative Fuels	4	RST 2-4,7-9; L 1,2; SL 1,2; W 2,4,6,7	
		22	Solar & Wind Energy in Transportation	6	RST 2-4, 6, 8; L 1,2; SL 1,2; W 2,4	FIF4; NQ1-3; NRN3
		23	Ways to Reduce Fuel Consumption	4	RST 2-4; L 1,2; SL 1,2; W 2,4,5,9	ACED1
			Green Construction			
		24	Energy Efficiency, Green Construction & Solar Home Planning	14	RST 2-4, 7,8; L 1,2; SL 1,2; W 2,4,7,8	GGPE 2,3; GMG 1-3
		25	Glazing	8	RST 2-4,8,9; L 1,2; SL 1,2; W 2	
		26	Thermal Mass	8	RST 2-4,7,8; L 1,2; SL 1,2; W 2	FTF 5,6
		27	Insulation	10	RST 2-4,7-9; L 1,2; SL 1,2; W 2,4,6,7	SIC 1,6; SID 1-9
		28	Integrated Passive Solar & Passive Solar Cooling	10	RST 2,3,4; L 1,2; SL 1,2; W 2	GGPE 2,3
		29	Harvesting Energy	6	RST 2-4,8-9; L 1,2; SL 1,2; W 2,4	FTF 5
		30	Designing to Conserve Water	4	RST 2-4,7-9; L 1,2; SL 1,2; W 2,4,6,7	APR 6,7; GMG 1-3; NQ 1-3
			Resource Conservation			
		31	Natural & Renewable Resources	10	RST 2-4,7-9; L 1,2; SL 1,2; W 2,4,6,7	
		32	Nonrenewable Resources	8	RST 2-4,7-9; L 1,2; SL 1,2; W 2,4,6,7	
		33	Conservation in Industry	6	RST 2-4,7-9; L 1,2; SL 1,2; W 2,4,6,7	ASSE1-3; NQ1-3
		34	Conservation in Manufacturing	6	RST 2-4, 9; L 1,2; SL 1,2; W 2,4	
		35	Waste	6	RST 2-4; L 1,2; SL 1,2; W 2	
		36	Soil Conservation	6	RST 2-4, 7-9; L 1,2; SL 1,2; W 2,4,6-8	ACED2; ASSE1-3; FIF4
		37	Water Conservation	6	RST 2-4,7-9; L 1,2; SL 1,2; W 2,4,6,7	APR 6,7; GMG 1-3; NQ 1-3
		38	Ecosystems	6	RST 2-4,7-9; L 1,2; SL 1,2; W 2,4	
		39	Wildlife	4	RST 2-4,7-9; L 1,2; SL 1,2; W 2,4,6,7	
		40	Conservation as a Community Effort	10	RST 2-4,7-9; L 1,2; SL 1,2; W 2,4,6,7,8	ACED2
			TOTAL	270		
Green Tech 12	GT04M	1	Fundamentals of CAD	4	RST 2,4,7,8,10; L 1,2;SL 1,2; W 2,4	AREI 1-7; FIF 4-6; FLE 1-5; FTF 1-7; GC 1-5;
		2	Fundamentals of Computer Systems	10		GCO 1-8; GGMD 1-4; GGPE 1-7; GMG 1-3;
		3	Components of CAD System	6	RST 2,3,4,10; L 1,2; SL 1,2; W 2,4	GSRT 1-11; NQ 1-3; NRN 1-3
		4	Fundamentals operation of CAD System	10	RST 2,3,4,10; L 1,2; SL 1,2; W 2,4	
		5	Drawing development and editing	25	RST 2,3,4,10; L 1,2; SL 1,2; W 2,4	
		6	CAD applications	15	RST 2,3,4,10; L 1,2; SL 1,2; W 2,4	
		7	Geo-Metric modeling (2D)	20	RST 2,3,4,10; L 1,2; SL 1,2; W 2,4	GGMD 3,4; GMG 1-3; GGPE 6,7; NVM 1-5

8	Geo-Metric modeling (3D)	25		
9	Design development & evaluation	18	RST 2,3,4,7-10; L 1,2; SL 1,2; W 2,4	
10	Lab Safety	2	RST 2,4,7,10;L 1,2;SL 1,4; W 2	SIC 2,6; SMD7
11	Fractions and Decimals	4	RST2,4,7,10;L 1,2; SL 1,2;W 2,4	NQRN 1-3
12	Measurement	6	RST 2,4,7,10; L 1,2; SL 1,2;W 2,4	NQ 1-3; NRN 1-3
13	Blueprint Reading Dimensioning and Tolerance Procedures	14	RST 2, 4,10; L 1,2; SL 1,2;W 2,4,9	NQ 1-3; NRN 1-3; GCO 1; GGPE 4-7; NRN 1-3
14	Precision Measurement and Layout	4	RST 2, 3,4,10; L 1,2; SL 1,2;W 4	
15	Bench Work	40	RST 2,3,4,10; L 1,2; SL 4;W2	
16	Introduction to Computer Numerical Control (CNC)	12	RST 1,2,3,4,7,8,10; L1,2; SL 1,2,4; W2,4	NRN 1-3; NQ 1-3; GCO 1-8; GSRT 1-11; GC 1-
17	CNC Machining Centers (Mill) Programming	3	RST 1,2,3,4,7,8,10;L 1,2; SL 1,2,4; W2,4	5;GGPE 1-7; GGMD 1-4; GMG 1-3; FIF 4-6; FLE 1-
18	CNC Turning Center (Lathe) Programming	1	RST 1,2,3,4,7,8,10;L 1,2; SL 1,2,4; W2,4	5; FTF 1-7; AREI 1-7
19	Rapid Prototyping	34	RST 1,2,3,4,7,8,10;L 1,2; SL 1,2,4; W2,4	
20	3D Scanner Technology	10	RST 1,2,3,4,7,8,10;L 1,2; SL 1,2,4; W2,4	GMD 3,4, GSRT 6-11
21	Metallurgy (Welding)	1	RST 1,2,3,4,7,8,10;L 1,2;SL 1,2,4; W2,4	GCO 1-8, NRN 1-3, NQ 1-3
22	Occupational/Career Studies	6		
		Total		

NYSED Approved Integrated Academic Credit available:

English Language Arts - 4th Unit – Portfolio review

Math or Science - 3rd Unit - Technology Credit