

WESTERN DAKOTA

TECHNICAL COLLEGE

ENVIRONMENTAL ENGINEERING TECHNICIAN - CEA

Associate of Applied Science, 66 Credit Hours, 18-Month Program

The Environmental Engineering Technician – Controlled Environment Agriculture (CEA) program is designed to prepare students for work in the exciting and growing field of controlled environment agriculture. Successful completion of this Associate of Applied Science Degree prepares students to become greenhouse professionals with skills that can be applied to home, farm, or commercial scale operations. With the expanded interest in farm-to-table, there are increased opportunities to apply the skills learned in this program in a variety of settings.

Course	No.	Course Title	Credits
General Education Requirements			
BIOL	101	BIOLOGY SURVEY I	3
BIOL	101L	BIOLOGY SURVEY I LAB	1
CHEM	106	CHEMISTRY SURVEY	3
CHEM	106L	CHEMISTRY SURVEY LAB	1
ENGL	101	COMPOSITION I* <i>or</i>	3
ENGL	106	WORKPLACE COMMUNICATIONS I*	
MATH	114	COLLEGE ALGEBRA **	3
MICR	231	GENERAL MICROBIOLOGY	3
MICR	231L	GENERAL MICROBIOLOGY LAB	1
PSYC	103	HUMAN RELATIONS IN THE WORKPLACE	3
Total			21
Technical Requirements			
AE	150	ARCHITECTURAL PRINT READING	1
AG	115	INTRODUCTION TO AGRONOMY & PLANT SCIENCE	3
BUS	233	BUSINESS ENTREPRENEURSHIP	3
CEA	150	AQUAPONICS/INDOOR GROWING	3
CEA	205	HORTICULTURE	3
CEA	250	AQUACULTURE	3
CEA	255	CEA DESIGN	3
CEA	280	TOPICS IN CONTROLLED ENVIRONMENT AGRICULTURE	1
EET	102	INTRODUCTION TO ENVIRONMENTAL SCIENCES	4
EET	140	LABORATORY METHODS IN ENVIRONMENTAL SCIENCE	3
EET	260	WASTEWATER COLLECTION & TREATMENT	3
EET	299	FIELD INTERNSHIP <i>or</i>	3
INT	202	GLOBAL ACADEMIC EXPERIENCE	
IEL	105	INTRODUCTION TO INDUSTRIAL ELECTRONICS	4
IEL	221	PROGRAMMABLE LOGIC CONTROLLERS	2
IEL	222	PROGRAMMABLE LOGIC CONTROLLERS LAB	3
INT	201	GAE/INTERNSHIP PREP	3
Total			45

*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

**Prerequisite: Acceptable ACCUPLACER score or Intermediate Algebra.

The Controlled Environment Agriculture program is on hiatus and not enrolling students for the 2024-25 academic year.

Fall start semester breakdown on next page.

2024-2025 Academic Catalog – 6/2024

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Semester Breakdown AAS Fall Start

First Semester	CR	Second Semester	CR
BIOL 101 Biology Survey I	3	AE 150 Architectural Print Reading	1
BIOL 101L Biology Survey Lab 1	1	CEA 150 Aquaponics/Indoor Growing	3
CHEM 106 Chemistry Survey	3	EET 140 Laboratory Methods in Environmental Science	3
CHEM 106L Chemistry Survey Lab	1	IEL 221 Programmable Logic Controllers	2
EET 102 Introduction to Environmental Sciences	4	IEL 222 Programmable Logic Controllers Lab	3
IEL 105 Introduction to Industrial Electronics	4	MATH 114 College Algebra	3
Total Credit Hours	16	Total Credit Hours	15
Third Semester (Summer)	CR		
INT 201 GAE/Internship Prep (first 2 weeks)	3		
INT 202 Global Academic Experience (last 6 weeks) <i>or</i>	3		
EET 299 Field Internship			
Total Credit Hours	6		
Fourth Semester	CR	Fifth Semester	CR
AG 115 Introduction to Agronomy & Plant Science	3	BUS 233 Business Entrepreneurship	3
CEA 205 Horticulture	3	CEA 255 CEA Design	3
CEA 250 Aquaculture	3	CEA 280 Topics in Controlled Environment Agriculture	1
ENGL 101 Composition I <i>or</i>	3	EET 260 Wastewater Collection and Treatment	3
ENGL 106 Workplace Communications I		PSYC 103 Human Relations in the Workplace	3
MICR 231 General Microbiology	3		
MICR231L General Microbiology Lab	1		
Total Credit Hours	16	Total Credit Hours	13

Spring start semester breakdown on the next page

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Semester Breakdown – AAS Spring Start

First Semester	CR	Second Semester	CR
AE 150 Agriculture Print Reading	1	BIOL 101 Biology Survey I	3
CEA 150 Aquaponics/Indoor Growing	3	BIOL 101L Biology Survey I Lab	1
CEA 280 Topics in Controlled Environmental Agriculture	1	EET 102 Introduction to Environmental Sciences	4
CHEM 106 Chemistry Survey	3	ENGL 101 Composition <i>or</i>	3
CHEM 106L Chemistry Survey Lab	1	ENGL 106 Workplace Communications	
EET 140 Laboratory Methods in Environmental Science	3	IEL 105 Introduction to Industrial Electronics	4
MATH 114 College Algebra	3		
Total Credit Hours	15	Total Credit Hours	15
Third Semester	CR	Fourth Semester (summer)	CR
BUS 233 Business Entrepreneurship	3	EET 299 Field Internship <i>or</i>	3
CEA 255 CEA Design	3	INT 202 Global Academic Experience (last 6 weeks)	
EET 260 Wastewater Collection and Treatment	3	INT 201 GAE/Internship Prep (first 2 weeks)	3
IEL 221 Programmable Logic Controllers	2		
IEL 222 Programmable Logic Controllers Lab	3		
Total Credit Hours	14	Total Credit Hours	6
Fifth Semester	CR		
AG 115 Introduction to Agronomy	3		
CEA 205 Horticulture	3		
CEA 250 Aquaculture	3		
MICRO 231 General Microbiology	1		
MICRO 231L General Microbiology Lab	3		
PSYC 103 Human Relations in the Workplace			
Total Credit Hours	16		

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