



**CATALOG YEAR: 2021-2022**  
**INSTRUMENTATION & ELECTRICAL TECHNOLOGY**  
**PROGRAM GUIDE**

**FIRST SEMESTER**

COURSE NAME	COURSE PREFIX	COURSE NUMBER	CREDIT HOURS
College Algebra (TD & AAS only)	MATH	1100	3
Intro to Computer Technology	CSCI	1010	3
Core Industry Safety	CORE	1003	3
Electrical Systems & Equipment	INST	1011	2
Fund of Electricity & Electronics	ETRN	1112	4
<b>SEMESTER CREDIT HOURS</b>			<b>TD 15    AAS 15</b>

**SECOND SEMESTER**

COURSE NAME	COURSE PREFIX	COURSE NUMBER	CREDIT HOURS
Fund of Semiconductors Circuits & Transistors	ETRN	1212	4
<b>Students who complete all courses above are eligible to receive the CTS Instrument Helper (16 credit hours)</b>			
English Composition (AAS Only)	ENGL	1010	3
Introduction to Speech (AAS Only)	SPCH	1010 or 1200	3
Digital Circuits	ETRN	1420	3
Principles of Process Controls/IIoT	INST	1435	3
<b>SEMESTER CREDIT HOURS</b>			<b>TD 10    AAS 16</b>

**THIRD SEMESTER**

COURSE NAME	COURSE PREFIX	COURSE NUMBER	CREDIT HOURS
Physical Science (AAS Only)	PHSC	1010	3
Physical Science Lab (AAS Only)	PHSC	1010L	1
Pressure & Level Measurement	INST	1330	3
Flow & Final Control Elements	INST	1425	3
Temperature & Analytical Measurement	INST	2732	3
Motor Controls, VFD & Vibration Analysis	INST	2745	3
<b>SEMESTER CREDIT HOURS</b>			<b>TD 12    AAS 16</b>

**FOURTH SEMESTER**

COURSE NAME	COURSE PREFIX	COURSE NUMBER	CREDIT HOURS
Choose 3 hours from any Social Science course (AAS Only)	ECON, POLI, PSYC, SOCL	****	3
Programmable Logic Controllers	INST	2741	4
Industrial Electrical Control Systems	INST	2755	4
Industry Troubleshooting Capstone (TD & AAS Only)	INST	2000	3
<b>SEMESTER CREDIT HOURS</b>			<b>TD 11    AAS 14</b>

**CTS- Instrument Helper = 16 credit hours**

**TD- Instrumentation Tech= 48 credit hours**

**AAS- Instrumentation & Electrical Technology = 61 credit hours**

## INSTRUMENTATION & ELECTRICAL TECHNOLOGY PRE-REQUISITES & CO-REQUISITES

### FIRST SEMESTER

COURSE NAME	CO-REQUISITE	PRE-REQUISITE
CORE 1003	INST 1011, ETRN 1112	
INST 1011	CORE 1003, ETRN 1112	
ETRN 1112	CORE 1003, INST 1011	

### SECOND SEMESTER

COURSE NAME	CO-REQUISITE	PRE-REQUISITE
ETRN 1212	ETRN 1420, INST 1435	CORE 1003, INST 1011, ETRN 1112
ETRN 1420	ETRN 1212, INST 1435	CORE 1003, INST 1011, ETRN 1112, MATH 1100
INST 1435	ETRN 1212, INST 1420	CORE 1003, INST 1011, ETRN 1112

### THIRD SEMESTER

COURSE NAME	CO-REQUISITE	PRE-REQUISITE
INST 1330	INST 1425, INST 2732, INST 2745	CORE 1003, INST 1011, ETRN 1112, ETRN 1212, ETRN 1420, INST 1435
INST 1425	INST 1330, INST 2732, INST 2745	CORE 1003, INST 1011, ETRN 1112, ETRN 1212, ETRN 1420, INST 1435
INST 2732	INST 1330, INST 1425, INST 2745	CORE 1003, INST 1011, ETRN 1112, ETRN 1212, ETRN 1420, INST 1435
INST 2745	INST 1330, INST 1425, INST 2732	CORE 1003, INST 1011, ETRN 1112, ETRN 1212, ETRN 1420, INST 1435

### FOURTH SEMESTER

COURSE NAME	CO-REQUISITE	PRE-REQUISITE
INST 2741	INST 2755, INST 2420, INST 2000	CORE 1003, INST 1011, ETRN 1112, ETRN 1212, ETRN 1420, INST 1435, INST 1330, INST 1425, INST 2732, INST 2745
INST 2755	INST 2741, INST 2420, INST 2000	CORE 1003, INST 1011, ETRN 1112, ETRN 1212, ETRN 1420, INST 1435, INST 1330, INST 1425, INST 2732, INST 2745
INST 2420	INST 2741, INST 2755, INST 2000	CORE 1003, INST 1011, ETRN 1112, ETRN 1212, ETRN 1420, INST 1435, INST 1330, INST 1425, INST 2732, INST 2745
INST 2000	INST 2741, INST 2755, INST 2420	CORE 1003, INST 1011, ETRN 1112, ETRN 1212, ETRN 1420, INST 1435, INST 1330, INST 1425, INST 2732, INST 2745