

AIR CONDITIONING TECHNOLOGY

Installing and servicing heating, air conditioning and refrigeration equipment is the focus of this program. Academic courses, theory courses, and laboratory experiences are designed to promote success in the air conditioning field.

The Boiler Maintenance Certificate is designed to complement our Associate in Applied Science (AAS) and Diploma for students enrolled in Air Conditioning Technology Program. Installing, initial start-up and servicing commercial boilers used in HVAC applications is the focus of this certificate. Theory courses and laboratory experiences are designed to promote success in boiler service and facility management.

The Chiller Certificate is designed to complement our Associate in Applied Science and Diploma for students enrolled in Air Conditioning Technology Program. Installing and servicing Chillers used in commercial and industrial applications is the focus of this certificate. Theory courses and laboratory experiences are designed to promote success in the service and maintenance of Chillers.

Students enrolled in the Air Conditioning Technology program must achieve a minimum grade of "C" in each technical course.

Degrees

- Air Conditioning Technology - AAS (<https://catalog.kctcs.edu/programs-of-study/aas/air-conditioning-technology/air-conditioning-technology-aas/>)
 - Air Conditioning Technology Track (<https://catalog.kctcs.edu/programs-of-study/aas/air-conditioning-technology/air-conditioning-technology-aas/#airconditioningtechnologytrack>)
 - Commercial Air Conditioning Technology Track (<https://catalog.kctcs.edu/programs-of-study/aas/air-conditioning-technology/air-conditioning-technology-aas/#commercialairconditioningtechnologytrack>)
 - Commercial Systems and Building Controls Technology Track (<https://catalog.kctcs.edu/programs-of-study/aas/air-conditioning-technology/air-conditioning-technology-aas/#commercialsystemsandbuildingcontrolstechnologytrack>)

Diplomas

- Heating, Ventilation, and Air Conditioning Mechanic - Diploma (<https://catalog.kctcs.edu/programs-of-study/aas/air-conditioning-technology/heating-ventilation-air-conditioning-mechanic-diploma/>)

Certificates

- Boiler Maintenance - Certificate (<https://catalog.kctcs.edu/programs-of-study/aas/air-conditioning-technology/boiler-maintenance-certificate/>)
- Building Controls Technician - Certificate (<https://catalog.kctcs.edu/programs-of-study/aas/air-conditioning-technology/building-controls-technician-certificate/>)
- Chiller Maintenance - Certificate (<https://catalog.kctcs.edu/programs-of-study/aas/air-conditioning-technology/chiller-maintenance-certificate/>)

- Domestic Air Conditioner and Furnace Installer - Certificate (<https://catalog.kctcs.edu/programs-of-study/aas/air-conditioning-technology/domestic-air-conditioner-furnace-installer-certificate/>)
- Environmental Control System Servicer - Certificate (<https://catalog.kctcs.edu/programs-of-study/aas/air-conditioning-technology/environmental-control-system-servicer-certificate/>)
- Environmental System Repair Helper - Certificate (<https://catalog.kctcs.edu/programs-of-study/aas/air-conditioning-technology/environmental-system-repair-helper-certificate/>)
- Refrigeration Mechanic - Certificate (<https://catalog.kctcs.edu/programs-of-study/aas/air-conditioning-technology/refrigeration-mechanic-certificate/>)

Air Conditioning Technical Electives

This list is not all-inclusive. Other courses may be taken with approval of the program instructor/advisor.

Course	Title	Credits
ACR 112	Sheet Metal Fabrication	3
ACR 113	Sheet Metal Fabrication Lab	2
ACR 200	Commercial Refrigeration	3
ACR 201	Commercial Refrigeration Lab	2
ACR 206	Boilers	5
ACR 207	Commercial HVAC Systems	5
ACR 208	Chillers	4
ACR 209	Manual N Commercial Load Calculation and Design	4
ACR 210	Ice Machines	3
ACR 237	Building Controls I	5
ACR 238	Building Controls II	5
ACR 290	Journeyman Preparation	3
ACR 291	Special Problems I	1
ACR 293	Special Problems II	2
ACR 295	Special Problems III	3
ACR 298	Practicum	2
ACR 299	Cooperative Education Program	2
BAS 120	Personal Finance	3
BAS 160	Introduction to Business	3
BAS 170	Entrepreneurship	3
BEX 100	Basic Electricity for Non-Majors	3
BEX 101	Basic Electricity Lab for Non-Majors	2
BRX 110	Basic Blueprint Reading for Machinist	2
BRX 112	Blueprint Reading for Machinist	4
BRX 120	Basic Blueprint Reading	3
BRX 210	Mechanical Blueprint Reading	2
BRX 220	Blueprint Reading for Construction	3
CAD 100	Introduction to Computer Aided Design	3
CAD 102	Drafting Fundamentals	4
CIT 105	Introduction to Computers	3
CIT 111	Computer Hardware and Software	4
CIT 160	Intro to Networking Concepts	4
CIT 161	Introduction to Networks	4
COE 199	Cooperative Education: (Topic)	1-8
CPR 100	CPR for Healthcare Professionals	1

EET 116	Fiber Optics Systems	3	ELT 290	Selected Topics in Engineering Technology: (Topic) 1-4	
EET 118	Residential Network Wiring	3	ELT 295	Independent Problems	1-2
EET 148	Electronic Drafting	3	ET 113	Laser Optics Components	3
EET 150	Transformers	2	ETT 114	Voice & Data Installer Level II	4
EET 151	Transformers Lab	1	ETT 120	Project Management	3
EET 154	Electrical Construction I	2	ETT 122	Voice & Data Installer Technician	3
EET 155	Electrical Construction I Lab	2	ETT 123	Voice & Data Installer Technician Lab	2
EET 198	Practicum	2	FPX 100	Fluid Power	3
EET 199	Cooperative Education Program	2	FPX 101	Fluid Power Lab	2
EET 250	National Electrical Code	4	IET 102	Preventive Maintenance	2
EET 252	Electrical Construction II	2	IET 104	Blueprint Reading/Schematics	2
EET 254	Electrical Construction	3	IET 107	Basic Electricity/Electronics	3
EET 255	Electrical Construction Lab	4	IET 109	Safety	3
EET 264	Rotating Machinery	2	IET 201	Electrohydraulics/Pneumatics	6
EET 265	Rotating Machinery Lab	2	IET 203	Programmable Logic Controllers	5
EET 266	Rotating Machinery and Transformers	3	IET 206	Controls and Instrumentation	5
EET 267	Rotating Machinery and Transformers Lab	3	IMT 150	Maintaining Industrial Equipment I	3
EET 268	Rotating Machinery Electrical Motor Controls I	3	IMT 151	Maintaining Industrial Equipment I Lab	2
EET 269	Rotating Machinery and Motor Controls I Lab	4	ISX 100	Industrial Safety	3
EET 270	Electrical Motor Controls I	2	ISX 101	Introduction to Industrial Safety	3
EET 271	Electrical Motor Controls I Lab	2	ISX 1003	CPR & First Aid	1
EET 272	Electrical Motor Controls II	2	ISX 105	General Industrial Safety	2
EET 273	Electrical Motor Controls II Lab	2	ISX 1051	10-hour General Industry	0.67
EET 274	Electrical Motor Controls	3	ISX 1052	General Industry Topics	1.33
EET 275	Electrical Motor Controls Lab	4	ME 205	Introduction to Computer Graphics	3
EET 276	Programmable Logic Controllers	2	ME 220	Engineering Thermodynamics I	3
EET 277	Programmable Logic Controllers Lab	2	MNG 123	Mining Electricity I	4
EET 281	Special Problems I	1	MNG 286	Roof Control and Ventilation	3
EET 283	Special Problems II	2	PLB 100	Basic Theory of Plumbing	3
EET 285	Special Problems III	3	PLB 105	Plumbing Principles	3
EET 286	Programmable Logic Controllers II	2	PLB 150	Plumbing, Introduction to the Trade	3
EET 287	Programmable Logic Controllers II Lab	2	PLB 151	Basic Plumbing Skills	3
EET 298	Practicum	1-8	WLD 100	Oxy-Fuel Systems	2
EET 299	Cooperative Education Program	1-8	WLD 101	Oxy-Fuel Systems Lab	2
EGY 240	Energy Efficiency and Analysis	4	WLD 110	Cutting Processes	2
ELT 102	Blueprint Reading	2	WLD 111	Cutting Processes Lab	3
ELT 106	Mechanical Engineering Graphics	2	WLD 120	Shielded Metal Arc Welding	2
ELT 107	Computer Applications for Technicians	4	WLD 130	Gas Tungsten Arc Welding	2
ELT 110	Circuits I	5	WLD 131	Gas Tungsten Arc Welding Fillet Lab	3
ELT 114	Circuits II	5			
ELT 118	Computer Numerical Control	3			
ELT 122	Mechanical Power Transmission Systems	3			
ELT 124	Mechanical Power Transmission Systems Lab	1			
ELT 201	Statics and Strength of Materials	4			
ELT 210	Devices I	4			
ELT 232	Computer Software Maintenance	3			
ELT 234	Computer Hardware Maintenance	3			
ELT 244	Electrical Machinery and Controls	4			
ELT 250	Programmable Logic Controllers	4			
ELT 261	Instrumentation and Measurements	3			
ELT 264	Mechanical Design	4			
ELT 265	Applied Fluid Power	3			