

TRAC-7

TECHNICAL RETRAINING TO
ACHIEVE CREDENTIALS



TRAC7.ORG

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TECHNICAL RETRAINING TO ACHIEVE CREDENTIALS (TRAC-7)

TRAC-7 is tomorrow's model of technical education and training.

Seven institutions of higher education in Kansas have forged a new vision of collaborative training and education that breaks down the stranglehold of place-bound learning to form an integrated model of Technical Retraining to Achieve Credentials (TRAC-7).

TRAC-7 has developed new methods of providing workers with academic and industry-recognized credentials to meet the demand for a skilled workforce by introducing blended learning.

Blended learning is the combination of online, hybrid-courses featuring real-time online interactions, and specialized mobile units which will travel to provide students with hands-on, job-centered training.

PROGRAMS

Advanced Systems Technology
Agri-Biotechnology
Electrical Power Technician
Environmental Technology

Food Science
Power Plant Technology
Risk Management

ENROLL TODAY!

1. Choose your favorite signature program on **www.trac7.org**.
2. Click the **"Request Info."** Button.
3. **Complete** the form and click **Submit!**

Or contact the signature program advisor directly via phone or email using the information located on the program page.

ADVANCED SYSTEMS TECHNOLOGY

WASHBURN INSTITUTE OF TECHNOLOGY

The Advanced Systems Technology program offers a 48 credit technical certificate and a 67 credit hour Associate of Applied Science Degree. Instruction includes electrical theory, wiring, motor controls, 3-Phase/Single Phase AC/DC motors, blueprint reading, programmable logic controllers (PLCs), hydraulics and pneumatics, and mechanical systems. The program includes introductory courses in **welding, machine tool and robotics.**

This program prepares graduates to work in a wide range of settings and graduates are employed in every type of industry. Co-requisite courses include Technical Math II and Physics. Recommended additional courses include technical communication, technical writing and computer applications.

Full time students will complete the certificate program in one year. Part time, including high school students, will complete the certificate program in four semesters. Students who successfully complete the certificate program may be eligible to continue on to seek a Bachelor's Degree at Washburn University. Courses are also offered at nontraditional times as an evening/weekend schedule for those unavailable for day time classes.

Career Pathways

- Production Worker - Average Starting Hourly Wage \$15.00 per hour
- General Maintenance Repair Worker - Average Starting Hourly Wage \$15.02 per hour
- Industrial Maintenance Technician - Average Starting Hourly Wage \$21.10 per hour

Pathways leading to careers with the AST program

- Fast TRAC Welding – 21 credit hours/18 weeks – focus on welding fabrication – employer connections – offered days and nights – Welders starting hourly wage range \$14-\$16 per hour.
- M-Tech – 12 credit hours – prepares Production Workers for employment – employer connections – Production workers starting hourly wage range \$14-\$16 per hour.



Washburn Institute of Technology | Offers: Advanced Systems Technology
www.washburntech.edu | 785.670.2200
6530 SE Forbes Avenue | Topeka, KS 66619
Program contact: 877.588.7140 or ast@washburn.edu



AGRI-BIOTECHNOLOGY

CLOUD COUNTY COMMUNITY COLLEGE

The Agri-Biotechnology program prepares students for entry-level positions in the **emerging Agri-Biotechnology industry.** The program provides a strong scientific background and extensive laboratory experience in methods currently used in research, government, and industry laboratories.

Courses incorporate various skills important for employment in entry-level positions in the bioscience industry. Students are instructed in laboratory techniques and instrumentation; basic computer skills associated with generating, analyzing, and presenting data; documentation of laboratory procedures according to industry standards; and regulatory affairs governing the bioscience industry. Students will learn to effectively work in cooperative teams in a laboratory setting to plan and complete experiments in a timely manner.

Career Pathways

- Technical Certificate - Starting Annual Salary Range \$20,000-\$35,000
- Associate of Applied Science Degree - Starting Annual Salary Range \$40,000-\$55,000
- Bachelors Degree - Starting Annual Salary Range \$50,000-\$65,000



Cloud County Community College | Offers: Agri-Biotechnology
www.cloud.edu | 800.729.5101
631 Caroline Avenue; Junction City, KS 66441 | 2221 Campus Drive; Concordia, KS 66901
Program contact: 785.238.8010 or trac7@cloud.edu



ELECTRICAL POWER TECHNICIAN

DODGE CITY COMMUNITY COLLEGE

A career as an Electrical Power Technician is both **challenging and rewarding**. This field focuses strongly on the construction and maintenance of high-voltage electrical power lines, which transmit electrical power from generation plants to substations, where electricity is then distributed to the customers.

Students enrolled in the Electrical Power Technician Program will receive training and instruction on the construction, maintenance, and repair of electric utility overhead and underground systems; all while learning how to climb a power pole. Students obtain practical knowledge and skill sets vital to obtaining successful careers in the electrical maintenance professional field. Additionally, students are exposed to the features unique to electrical career opportunities with cities, Rural Electric Associations, and contractors.

This unique degree program combines online instruction with hands-on lab time, offering students the opportunity to earn industry-approved credentials from our remote location in Emporia, or from the central campus location in Dodge City, Kansas. Using a mobile training unit purchased with grant funds, Dodge City instructors are able to travel to the remote location on scheduled weekends during the semester to offer online students hands-on training.

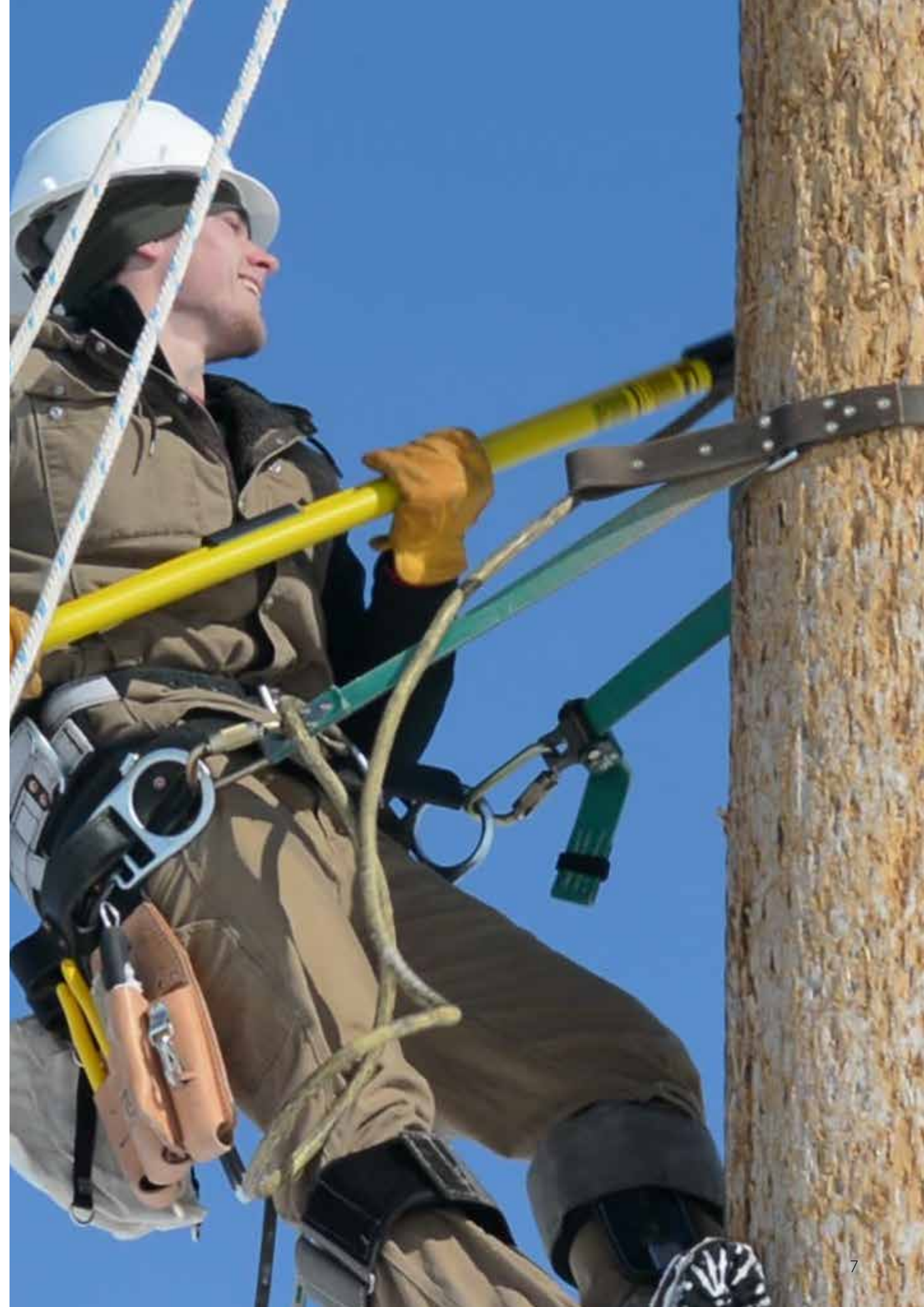
In addition to instruction, staff provides assistance in the job search and application process. Students in the EPT program have the opportunity to interview with industry partners and potential employers during scheduled times. Additionally, class time is set aside to help students develop professional résumés.

Career Pathways

- First Semester (Spring) - Starting Hourly Wage Range \$14-\$16 per hour
- Technical Certificate- Starting Hourly Wage Range \$16-\$22 per hour
- Technical Certificate + Third Semester (Spring)-Starting Hourly Wage Range \$18-\$22
- Associate of Applied Science Degree-Starting Hourly Wage Range \$18-\$22



Dodge City Community College | Offers: Electrical Power Technician
www.dc3.edu | 800.367.3222
2501 North 14th Avenue | Dodge City, KS 67801
Program contact: 620.227.9222 or trac7@dc3.edu



ENVIRONMENTAL TECHNOLOGY

SALINA AREA TECHNICAL COLLEGE

Looking for a **well paid career direction** or a new challenge? Consider the Environmental Technology program offered through Salina Area Technical College. The water quality treatment field is projected to lose upwards of one-third of its Kansas workforce to retirements in the next three to five years.

Forecasts suggest up to 30 percent of workers in this field will retire in the next five years. There are more than 4,500 state-certified water quality workers in Kansas. Opportunities are available in water production, distribution, wastewater treatment and conservation. Entry-level positions typically include operators and maintenance type positions to assistant superintendent and superintendent positions. Wages can vary, depending on location and size of the community.

Typical entry-level wages can vary between \$9-\$11 per hour to \$50,000-\$65,000 per year or more for management positions. Workers employed by cities can receive comprehensive medical, retirement and disability benefits. Employers typically pay for certification and continuing education courses.

Clean water is essential for everyday life. Environmental technicians and water treatment plant and system operators treat water to remove harmful pollutants from domestic and industrial liquid waste so that it is safe to drink and return to the earth.

Industrial facilities that send their wastes to municipal treatment plants must meet certain minimum standards to ensure that the wastes have been adequately pretreated and will not damage municipal treatment facilities. Plant operators must be familiar with guidelines established by Federal regulations and how they affect the plant.

Employment is concentrated in local government and private water, sewage, and other systems utilities.



Salina Area Technical College | Offers: Environmental Technology
www.salinatech.edu | 800.466.7989
2562 Centennial Road | Salina, KS 67401
Program contact: 785.309.3100 or trac7@salinatech.edu



FOOD SCIENCE

GARDEN CITY COMMUNITY COLLEGE

Preventing foodborne illness starts in production, continues to market and finally ends with the consumer. Students in Garden City Community College's Food Science program can earn stackable credentials from a one-day certificate to a full Associate's Degree. GCCC brings its mobile classroom right to businesses' front door to facilitate **continuing education needs** via quality assurance and food safety courses.

A safe food source is critical for everyone. The Food Science Program offered by Garden City Community College prepares students for careers in all aspects of food safety from industry to market. Students learn proper methods of handling, preparing and storing foods to prevent foodborne illness. Courses are offered in a variety of formats to meet the needs of students entering the career or members of the profession needing to renew certifications



Garden City Community College | Offers: Food Science
www.gcccks.edu | 620.276.7611
801 Campus Drive | Garden City, KS 67846
Program contact: 620.276.9535 or trac7@gcccks.edu



POWER PLANT TECHNOLOGY

FLINT HILLS TECHNICAL COLLEGE

The mission of the Power Plant Technology Program is to provide **educational opportunities** directed toward performing power plant related activities with safety, reliability, and efficiency consistent with the concepts and practices of the industry.

As the industry faces an aging work force, the need for qualified employees to fill entry level positions is on the rise. The utility industry has maintained a very stable work force over the past 40+ years, and as a result is experiencing a large aging workforce. With electrical usage in the US projected to increase 50% by 2035, many new generating facilities are being planned or under construction. The need to staff these new plants along with the need to replace the pool of retirees over the next 5 to 20 years creates a huge shortage of knowledgeable candidates to meet this demand. Projections for the nuclear industry alone indicate a shortage of 20,000 maintenance and operations candidates over the next ten years. Some projections identify an even greater number.

The electrical power generating industry is comprised of several different types of electricity-producing power plants including: Coal, Nuclear, Gas, Hydroelectric, Petroleum, Geothermal, Solar, Waste and Wind.

Students successfully completing the Power Plant Technology program will have technical knowledge that prepares them for advanced training and qualification at nuclear, fossil fuel and other types of electrical power generating facilities.

Career Pathways

- Plant Operator Trainee – Average Starting hourly Wage Range \$14-24 per hour
- Maintenance Technicians – Average Starting hourly Wage Range \$15-24 per hour
- Instrument and Control Technicians – Average Starting hourly Wage Range \$18-26 per hour

**FLINT HILLS
TECHNICAL
COLLEGE**

Flint Hills Technical College | Offers: Power Plant Technology
www.fhtc.edu | 800.711.6947
215 West 6th Avenue | Emporia, KS 66801
Program contact: 620.343.4712 or trac7@fhtc.edu



RISK MANAGEMENT

HIGHLAND COMMUNITY COLLEGE

The Risk Management program teaches you to **plan, direct and coordinate risk containment efforts** for businesses, as well as trains you to **analyze the financial costs of risk**. Depending on your track you can go straight to work, transfer to a university, or just add an additional certification to your degree.

This program is offered completely online to accommodate the needs of the working professional as well as the technologically competent high school graduate.

Some courses in this program include: Security and Loss Prevention, Risk Assessment, Investigations in the Workplace, Risk Control, Prevention and Assessment of Workplace Violence, Safety and Risk Finance.

Students who complete the Associate of Applied Science Degree are able to pursue a Bachelor of Science in Technology Management through the K-State 2+2 Program.



Highland Community College | Offers: Risk Management
www.highlandcc.edu
 203 West Bridge Street | Perry, KS 66073
 Program contact: 785.442.6129 or trac7@highlandcc.edu



PROGRAM COURSES

Advanced Systems Technology Program | Associate of Applied Science Degree

Course Number	Course Title	Credit Hours
IND104	Basic Electricity I	3
IND 108	Mechanical Systems I	3
IND 112	Fluid Power I	3
IND 116	Lathe/Mill/Grinder for I.M.	3
IND 144	Basic Electricity II	3
IND 148	Mechanical Systems II	3
IND 152	Electrical Control Systems I	3
IND156	Welding SMAW	3
IND 204	Electrical Control Systems II	3
IND 208	Fluid Power II	3
IND 212	Electrical Control Systems III	3
IND 216	Programmable Logic Controllers I	3
IND 244	Process Control	3
IND 248	Programmable Logic Controllers II	3
IND 252	Robotics I	3
IND 256	Robotics II	3
IND 105	OSHA	1
Fast TRAC Welding Courses		
WEL101	Welding Safety & OSHA 10	2
WEL110	Print Reading & Math I	1
WEL145	GMAW Welding	3
WEL120	OXY-Fuel Cutting Procedures	3
WEL131	SMAW	3
WEL135	SMAW I	3
WEL141	GMAW	3
WEL246	GTAW	2

Not listed above are 19 required hours of general education courses which include Technical Math II, Applied Physics, Technical Communications, Technical Writing, Computer Applications, Introduction to Economics, and College Skills.

Agri-Biotechnology Program | Associate of Applied Science Degree

Course Number	Course Title	Credit Hours
AG 127	Agriculture Science for Agri-Biotechnology	4
AG 147	Lab Methods in Agri-Biotechnology	4
AG 160	Introduction to Biotechnology	3
AG 236	Molecular Biology for Agri-Biotechnology	4
AG 237	Integrated Organic Chemistry & Biochemistry for Agri-Biotechnology	5
SC 111	Microbiology Lecture	3
SC 112	Microbiology Lab	2
SC 131	Chemistry I	5
Electives Choice of 13 hours		
AG 101	Plant Science	4
AG 108	Environmental Quality	3
AG 109	Environmental Quality Lab	1
AG 115	Animal Science	3
AG 220	Cooperative Ed Internship	2
SC 120	Human Anatomy & Physiology I	4
SC 121	Human Anatomy & Physiology II	4

Not listed above are 17 required hours of general education courses which include: English Composition or Survey of Technical Writing, Public Speaking, College Algebra, Principals of Biology, Intro to Sociology and a Humanities General Education course.

Electrical Power Technician Program | Associate of Applied Science Degree

Course Number	Course Title	Credit Hours
PE 146	Outdoor First Aid	3
EPT 120	Power Industry Safety & Relations	3
EPT 121	AC/DC Fundamentals	3
EPT 122	System Construction, Maintenance & Equipment	3
EPT 150	Lab Field Training I	6
EPT 103	Electrical Essentials	3
EPT 123	Transformers, Metering and Fusing	3
EPT 276	System Work Practice & Underground Dist.	5
EPT 151	Lab Field Training II	6
EPT 280	Applied Electrical & System Emergency Concept	3
EPT 255	On the Job Experience I	6
EPT 256	On the Job Experience II	6
	CDL Certificate	2

Not listed above are 9 required hours of general education courses which include: English, Public Speaking, Computer Science and Mathematics. For Technical Certificate required courses please view the online course catalog at dc3.edu/academics/programs-list.

Environmental Technology Program | Associate of Applied Science Degree

Course Number	Course Title	Credit Hours
ENV 102	Safety (OSHA-10)	1
ENV 163	Water & Wastewater Math	3
ENV 135	Management of Municipal Utilities	3
ENV 165	Potable Water Distribution Systems	3
ENV 115	Potable Water Systems O&M I	4
ENV 155	Collection Systems O&M I	4
ENV 105	Wastewater Treatment Plant O&M I	4
ENV 101	Water Treatment Chemistry	3
ENV 103	Potable Water Sources	3
ENV 108	Water Treatment Plant O&M II	4
ENV 109	Water Quality	3
ENV 111	Water & Wastewater Disinfection	3
ENV 117	Potable Water Systems O&M II	4
ENV 120	Internship	3
ENV 157	Collection Systems O&M II	4

Not listed above are 15 required hours of general education courses which include: Public Speaking, English Composition, Public Speaking, Introduction to Computer Applications and Concepts and Ethics in the Workplace.

Food Science Program | Associate of Applied Science Degree

Course Number	Course Title	Credit Hours
ANSI 131	Introduction to Food Science	3
ANSI 212	Food Safety	3
ANSI 209	Food Sanitation (ServSafe)	3
AGRI 100	Agriculture in Our Society	1
ANSI 206	Principles of Meat Evaluation	3
ANSI 2701-6	Food Science Internship	6
ANSI 208	Basic Food Chemistry	3
ANSI 252	HACCP	3
ANSI 207	Principles of Meat Science	3
ANSI 251	Basic Food Microbiology	3
ANSI 129	Meat and Carcass Evaluation	3
	Food Science Electives	12

Not listed above are 18 required hours of general education courses which include: Communication Elective, Mathematics & Food Science Elective, Social Sciences/Humanities/Fine Arts Elective, Physical Fitness Elective, and College Skills Development.

Power Plant Technology Program | Associate of Applied Science Degree

Course Number	Course Title	Credit Hours
HHS 261	First Aid and CPR	1
PDV 101	Professional Development I	1
PDV 202	Current Issues in Technology	3
PDV 203	Management Principles in Technology	3
PPT 107	Properties of Materials	1
PPT 108	Power Plant Fundamentals II	2
PPT 121	Basic Math & Physics	3
PPT 137	Power Plant Safety & Work Performance	2
PPT 123	Basic Mechanics (includes lab)	5
PPT 124	Introduction to Scaffolding	6
PPT 125	Fuel/Water Chemistry and Control	3
PPT 126	Basic Electricity (includes lab)	6
PPT 128	Basic Print Reading	2
PPT 131	Introduction to Power Plant Systems	2
PPT 132	Electrical Equipment	2
PPT 133	Basic Computers	1
PPT 138	OSHA 10	1
PPT 230	Heat Transfer & Fluid Flow	2
PPT 251	Rigging and Lift Equipment	1

Not listed above are 16-17 required hours of general education courses which include: Written Communications, Oral Communications, Mathematics, Life/Natural Sciences and Behavioral Sciences. For Technical Certificate required courses please view the online course catalog at www.fhtc.edu/programs-and-majors/ppt/Power-Plant-Technology/Degrees-and-Certifications.

Risk Management Program | Associate of Applied Science Degree

Course Number	Course Title	Credit Hours
RM 100	Security & Loss Prevention I	3
RM 110	Risk Assessment I	3
RM 111	Investigations in the Workplace	3
RM 112	Security & Loss Prevention II	3
RM 114	Risk Control I	3
RM 115	Assess & Prevention of Workplace Violence	3
RM 116	Safety I	3
RM 117	Foundations of Information Systems Security & Loss Prevention	3
RM 200	Risk Finance I	3
RM 201	Safety II	3
RM 202	Risk Communication I	3
RM 204	Risk Quality	3

Not listed above are 18 required hours of general education courses which include: choice of one PE Elective, choice of one Computer Literacy course, choice of one Social & Behavioral Sciences course, choice of one Humanities and Fine Arts course, choice of one Mathematics or Science course. Also not listed above 9 required hours of Open Elective courses.



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