

ADDENDUM TO 2017-2018 COURSE CATALOG

RANKEN TECHNICAL COLLEGE

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ADVANCED DEGREE OPTIONS & GENERAL EDUCATION

- 10 Bachelor of Science in Applied Management

Internship Hours:

AMT2225 Automotive Professional Internship (St. Louis)	29 Hours
AMT2225 Automotive Professional Internship (Wentzville)	29 Hours
MFG Internship 1005/2012/1115/2015	29 Hours
APT Internship 1205/2105/2205	20 Hours
Certified Dealership Internship 1105/1205/2005/2105 (AFA, GMT, HON, TOY)	40 Hours
PCT Internship 1105/1205/2005/2105	36 Hours
IET Internship 1105/1115/1205/1215/2005/2115/2205/2215/2305/2315	40 Hours

PROFESSIONAL COLLISION REPAIR TECHNOLOGY

FORMERLY AUTOMOTIVE COLLISION REPAIR TECHNOLOGY

ASSOCIATE OF TECHNOLOGY, ASSOCIATE OF SCIENCE, OR CERTIFICATE OF TECHNOLOGY IN PROFESSIONAL COLLISION REPAIR TECHNOLOGY (pg. 19)

TECHNICAL EDUCATION COURSES				PREREQUISITES
Section One	PCT1100	Collision Repair Fundamentals and Detailing	10	
	PCT1105	PCT Internship I	2	
Section Two	PCT1200	Collision Repair	10	PCT1100
	PCT1205	PCT Internship II	2	
Section Three	PCT2000	Collision Practices	10	PCT1200
	PCT2005	PCT Internship III	2	
Section Four	PCT2100	Advanced Collision Repairs	10	PCT2000
	PCT2105	PCT Internship IV	2	
Section Five	PCT2200	Aluminum Repairs	12	PCT2100
Total Technical Credit Hours Required			60	

GENERAL EDUCATION COURSES				PREREQUISITES
English/Social Sciences	ENG1101	College Composition I	3	Placement Exam or ENG1099
	ENG2102	College Composition II	3	ENG1101
	COM1105	Oral Communications	3	
	SOC1206	Principles of Sociology or	3	ENG1099 (Co. Req.)
	PSY1206	Introduction to Psychology	3	ENG1099 (Co. Req.)
Mathematics/Science	MTH1110	Elementary Algebra and MTH1111 Intermediate Algebra or	6	Placement Exam or MTH1099
	MTH1100	Elementary/Intermediate Algebra	3	Placement Exam
Business/Information	BUS1000	Career Success Skills	3	
Technology	MNG1224	Automotive Service Management	3	ENG1099 (Co. Req.)
Associate of Science	MTH2112	College Algebra	3	MTH1100 or MTH1111
Additional Required	MTH2220	Trigonometry	3	MTH2112
Courses	PHY2230	College Physics	3	MTH2220
	MTH2240	Survey of Calculus	3	MTH2112

GENERAL EDUCATION COURSES (CERTIFICATE OF TECHNOLOGY)				PREREQUISITES
	COM1080	Technical Communications	3	
	BUS1000	Career Success Skills	3	

CERTIFIED DEALERSHIP TECHNICIAN PROGRAMS

ASSOCIATE OF TECHNOLOGY, ASSOCIATE OF SCIENCE, OR CERTIFICATE OF TECHNOLOGY IN AUTOMOTIVE MAINTENANCE TECHNOLOGY (TOYOTA T-TEN) (pg. 28)

DAY PROGRAM COURSES				PREREQUISITES	
Section One	TOY1100	Maintenance and Light Repair	10	Department Approval	
	TOY1105	T-TEN Internship I	2		
Section Two	TOY1200	Engines and Electrical	10	TOY1100	
	TOY1205	T-TEN Internship II	2		
Section Three	TOY2000	Manual Transmission and HVAC	10	TOY1200	
	TOY2005	T-TEN Internship III	2		
Section Four	TOY2100	Engine Controls and Automatic Transmissions	10	TOY2000	
	TOY2105	T-TEN Internship IV	2		
Section Five	TOY2200	Automotive Diagnostics	10	TOY2100	
Total Technical Credit Hours Required			58		

GENERAL EDUCATION COURSES (CERTIFICATE OF TECHNOLOGY)			PREREQUISITES	
COM1080	Technical Communications		3	
BUS1000	Career Success Skills		3	

Important Note: Only courses in which a grade of "C" or higher is earned may be applied toward this Ranken degree.

ASSOCIATE OF TECHNOLOGY, ASSOCIATE OF SCIENCE, OR CERTIFICATE OF TECHNOLOGY IN AUTOMOTIVE MAINTENANCE TECHNOLOGY (HONDA PACT) (pg. 28)

DAY PROGRAM COURSES				PREREQUISITES	
Section One	HON1100	Maintenance and Light Repair	10	Department Approval	
	HON1105	PACT Internship I	2		
Section Two	HON1200	Engines and Electrical	10	HON1100	
	HON1205	PACT Internship II	2		
Section Three	HON2000	Manual Transmissions and HVAC	10	HON1200	
	HON2005	PACT Internship III	2		
Section Four	HON2100	Engine Controls and Automotive Transmissions	10	HON2000	
	HON2105	PACT Internship IV	2		
Section Five	HON2200	Automotive Diagnostics	10	HON2100	
Total Technical Credit Hours Required			58		

GENERAL EDUCATION COURSES (CERTIFICATE OF TECHNOLOGY)			PREREQUISITES	
COM1080	Technical Communications		3	
BUS1000	Career Success Skills		3	

Important Note: Only courses in which a grade of "C" or higher is earned may be applied toward this Ranken degree.

DIESEL TECHNOLOGY WENTZVILLE AND PERRYVILLE

CERTIFICATE OF TECHNOLOGY IN DIESEL TECHNOLOGY (pg. 33)

GENERAL EDUCATION COURSES			HOURS	PREREQUISITES
COM1080	Technical Communication		3	
BUS1000	Career Success Skills		3	

ARCHITECTURAL TECHNOLOGY

BACHELOR OF SCIENCE, ASSOCIATE OF SCIENCE, OR ASSOCIATE OF TECHNOLOGY IN ARCHITECTURAL TECHNOLOGY (pg. 40)

DAY PROGRAM COURSES			PREREQUISITES
ART3123	Intro to BIM	3	ART2120 *No pre-requisite

GENERAL EDUCATION COURSES			PREREQUISITES
PHY2230	College Physics	3	MTH2112 *MTH2220

CARPENTRY & BUILDING CONSTRUCTION TECHNOLOGY

ASSOCIATE OF TECHNOLOGY OR ASSOCIATE OF SCIENCE IN CARPENTRY AND BUILDING CONSTRUCTION TECHNOLOGY (pg. 46)

DAY PROGRAM COURSES			PREREQUISITES
First Semester	CRP1110	Residential Blueprint Reading	2
	CRP1115	Framing and Formwork	12
Second Semester	CRP1210	Construction Estimating and Management	2 All CRP1100 Courses
	CRP1215	Interior and Exterior Finishes	12 All CRP1100 Courses
Third Semester	CRP2101	Residential Housing Construction I	15 All CRP1200 Courses
Fourth Semester	CRP2201	Residential Housing Construction II	15 CRP2101
	CRP2202	Welding for Carpenters	2 CRP2101
Total Technical Credit Hours Required			52

HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION TECHNOLOGY

ASSOCIATE OF TECHNOLOGY OR ASSOCIATE OF SCIENCE IN HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION (pg. 50)

HVA1011 Fundamentals of Heat Transfer and Domestic Applications Theory	5
HVA1012 Fundamentals of Heat Transfer and Domestic Applications Shop	8
*HVA1200 Fundamentals of Heat Transfer and Domestic Applications	13
HVA1001 Electrical for HVACR Theory	5
HVA1002 Electrical for HVACR Shop	8
*HVA1000 Electrical for HVACR Electrical	13
HVA2111 Commercial Refrigeration and Light Commercial HEAT/AC Theory	5
HVA2112 Commercial Refrigeration and Light Commercial HEAT/AC Shop	8
*HVA2100 Commercial Refrigeration and Light Commercial HEAT/AC	13
HVA2211 Residential Heat/Air and Commercial Ice Makers Theory	5
HVA2212 Residential Heat/Air and Commercial Ice Makers Shop	8
*HVA2212 Residential Heat/Air and Commercial Ice Makers Shop	13

MAJOR APPLIANCE TECHNOLOGY

ASSOCIATE OF TECHNOLOGY OR ASSOCIATE OF SCIENCE IN MAJOR APPLIANCE TECHNOLOGY (pg. 54)

MAT2211 Major Appliance Technology Theory	5
MAT2212 Major Appliance Technology Shop	8
*MAT2200 Major Appliance Technology	13

PLUMBING TECHNOLOGY

CERTIFICATE IN PLUMBING AND PIPEFITTING TECHNOLOGY (pg. 57)

EVENING PROGRAM COURSES			HOURS
Section 1	PPT0100	Plumbing Foundations	6
Section 2	PPT0120	Residential Plumbing	6
Section 3	PPT0130	Water Supply and Waste/Vent Systems	6
Section 4	PPT0140	Commercial Plumbing	6
Section 5	PPT0150	Repair Plumbing	6
Section 6	PPT0160	Pipefitting and Plumbing Code	6
Total Technical Credit Hours for Certificate Completion			36

CONTROL SYSTEMS TECHNOLOGY

ASSOCIATE OF TECHNOLOGY OR ASSOCIATE OF SCIENCE IN CONTROL SYSTEMS TECHNOLOGY (pg. 62)

DAY PROGRAM COURSES			PREREQUISITES	
Fourth Semester	CST2213	Instrumentation and Process Control Theory	7	ELC2010
	CST2214	Instrumentation and Process Control Shop	6	ELC2010

ELECTRICAL AUTOMATION TECHNOLOGY ST. LOUIS AND WENTZVILLE

ASSOCIATE OF TECHNOLOGY OR ASSOCIATE OF SCIENCE IN ELECTRICAL AUTOMATION TECHNOLOGY (WENTZVILLE) (pg. 64)

First Semester			
EEL1100 Introduction to National Electronic Code			3
EEL1111 DC/AC Electrical Fundamentals Theory			5
EEL1110 DC/AC Electrical Fundamentals Lab			2
EEL1112 Electrical Wiring Shop			3
*EEL1120 Electrical Applications			13
*EEL1220 Introduction to Automation			14

INFORMATION TECHNOLOGY

ASSOCIATE OF TECHNOLOGY OR ASSOCIATE OF SCIENCE IN INFORMATION TECHNOLOGY (pg. 72)

DAY PROGRAM COURSES	RANKEN ST. LOUIS	HOURS	PREREQUISITES
First Semester	CNT1100 Operating Systems	15	MTH1100 or MTH1110 (Co. Req.)

Second Semester

CNT1221 Introduction to Internetworking Technology			
*CNT1220 Introduction to Internetworking Technologies		13	

Third and Fourth Semester

Network Systems Management Technology Option - Combo Track			
CNT2027 Advanced Networking and Internetworking Infrastructure Technology Theory		5	
CNT2028 Advanced Networking and Internetworking Infrastructure Technology Lab		8	
*INF2100 Cisco Network Administration		13	
*INF2025 Microsoft Network Administration I		7	
*INF2026 Microsoft Network Administration II		7	

Network Architecture and Design Technology Option - Cisco Track

CNT2027 Advanced Networking and Internetworking Infrastructure Technology Theory		5	
CNT2028 Advanced Networking and Internetworking Infrastructure Technology Lab		8	
*INF2100 Cisco Network Administration		13	
*INF2200 Cyber Security and VOIP		13	

ASSOCIATE OF TECHNOLOGY OR ASSOCIATE OF SCIENCE IN INFORMATION TECHNOLOGY (WENTZVILLE) (pg. 68)

DAY PROGRAM COURSES	RANKEN WENTZVILLE	HOURS	PREREQUISITES
First or Second Semester	CNT1220 Introduction to Internetworking Technologies	7	CNT1100* No pre-req.
	CNT1210 MicroComputer Hardware & Peripherals	7	

ASSOCIATE OF TECHNOLOGY OR ASSOCIATE OF SCIENCE IN INFORMATION TECHNOLOGY - NETWORK SYSTEMS MANAGEMENT (PERRYVILLE) (pg. 72)

DAY PROGRAM COURSES	RANKEN PERRYVILLE	HOURS	PREREQUISITES
First or Second Semester	CNT1100 Operating Systems	15	
First or Second Semester	CNT1210 Microcomputer Hardware and Peripherals	7	
	CNT1220 Introduction to Internetworking Technologies	7	MTH1100/MTH1110
Third or Fourth Semester	INF2100 Cisco Network Administration	13	1st & 2nd semester classes
Third or Fourth Semester	INF2025 Microsoft Network Administration I	7	1st & 2nd semester classes
	INF2026 Microsoft Network Administration II	7	1st & 2nd semester classes

GENERAL EDUCATION COURSES				PREREQUISITES
English/Social Sciences	ENG1101	College Composition I	3	Placement Exam or ENG1099
	ENG2102	College Composition II	3	ENG1101
	COM1105	Oral Communications	3	
	SOC1206	Principles of Sociology or	3	ENG1099 (Co. Req.)
	PSY1206	Introduction to Psychology	3	ENG1099 (Co. Req.)
Mathematics/Science	MTH1110	Elementary Algebra and MTH1111 Intermediate Algebra or	6	Placement Exam or MTH1099
	MTH1100	Elementary/Intermediate Algebra	3	Placement Exam
Business/Information Technology	BUS1000	Career Success Skills	3	
	MNG1204	Intro to Business & Management	3	ENG1099 (Co. Req.)
Associate of Science	MTH2112	College Algebra	3	MTH1100 or MTH1111
Additional Required Courses	MTH2220	Trigonometry	3	MTH2112
	PHY2230	College Physics	3	MTH2220
	MTH2240	Survey of Calculus	3	MTH2112

Important Note: Only courses in which a grade of "C" or higher is earned may be applied toward this Ranken degree.

ASSOCIATE OF TECHNOLOGY OR ASSOCIATE OF SCIENCE IN INTERNET & WEB-BASED TECHNOLOGY (pg. 72)

DAY PROGRAM COURSES	RANKEN ST. LOUIS	HOURS	PREREQUISITES
	IWT1227 Java Programming	7	IWT1229
	IWT12130 Web Databases	6	IWT1229

APPLICATION & WEB DEVELOPMENT TECHNOLOGY

ST. LOUIS AND WENTZVILLE

ASSOCIATE OF TECHNOLOGY OR ASSOCIATE OF SCIENCE IN APPLICATION & WEB DEVELOPMENT TECHNOLOGY (pg. 72)

DAY PROGRAM			HOURS	PREREQUISITES
First and Second Semester	AWD1000	Web Development Technologies	14	
	AWD1100	Programming Fundamentals with C#	14	
Third and Fourth Semester	AWD1111	.Net Framework with Web Databases	14	AWD1000, AWD1100
	AWD1112	Application Programming with Java	14	AWD1000, AWD1100
	Total Technical Credit Hours Required		56	

GENERAL EDUCATION COURSES				PREREQUISITES
English/Social Sciences	ENG1101	College Composition I	3	Placement Exam or ENG1099
	ENG2102	College Composition II	3	ENG1101
	COM1105	Oral Communications	3	
	SOC1206	Principles of Sociology or	3	ENG1099 (Co. Req.)
	PSY1206	Introduction to Psychology	3	ENG1099 (Co. Req.)
Mathematics/Science	MTH1110	Elementary Algebra and MTH1111 Intermediate Algebra or	6	Placement Exam or MTH1099
	MTH1100	Elementary/Intermediate Algebra	3	Placement Exam
Business/Information Technology	BUS1000	Career Success Skills	3	
	MNG1204	Intro to Business & Management	3	ENG1099 (Co. Req.)
Associate of Science	MTH2112	College Algebra	3	MTH1100 or MTH1111
Additional Required Courses	MTH2220	Trigonometry	3	MTH2112
	PHY2230	College Physics	3	MTH2220
	MTH2240	Survey of Calculus	3	MTH2112

Important Note: Only courses in which a grade of "C" or higher is earned may be applied toward this Ranken degree.

ADVANCED MANUFACTURING TECHNOLOGY WENTZVILLE

CERTIFICATE OF TECHNOLOGY IN ADVANCED MANUFACTURING (pg. 80)

GENERAL EDUCATION COURSES		HOURS	PREREQUISITES
COM1080	Technical Communication	3	
BUS1000	Career Success Skills	3	

INDUSTRIAL TECHNOLOGY

ASSOCIATE OF TECHNOLOGY OR ASSOCIATE OF SCIENCE IN INDUSTRIAL TECHNOLOGY (pg. 82)

INT1113 Industrial Mechanical Systems Theory	5
INT1114 Industrial Mechanical Systems Shop	8
*INT1120 Industrial Mechanical	12
INT1211 Welding/Metal Fabrication Hydraulics Theory	5
INT1212 Welding/Metal Fabrication Hydraulics Shop	8
*INT1220 Fluid Power/Welding and Metal Fabrication	12
INT2111 Industrial Facilities Maintenance Theory	5
INT2111 Industrial Facilities Maintenance Shop	8
*INT2120 Industrial Facilities Maintenance	12
INT2011 Industrial Electrical/PLC Theory	5
INT2011 Industrial Electrical/PLC Shop	8
*INT2020 Industrial Electrical/PLC	12

PRECISION MACHINING TECHNOLOGY

ASSOCIATE OF TECHNOLOGY OR ASSOCIATE OF SCIENCE IN PRECISION MACHINING TECHNOLOGY (pg. 88)

PMT1001 Introduction to Machining Theory	5
PMT1002 Introduction to Machining Lab	8
PMT1010 Mathematics for the Machine Trade	3
*PMT1010 Mathematics of the Machine Trade	3
*PMT1015 Precision Machining and NIMS Outcomes	13
PMT2001 Advanced Machining Theory	5
PMT2002 Advanced Machining Lab	8
*PMT1115 Advanced Precision Machining and NIMS Outcomes	13
PMT1011 Computer Numerical Control Theory	5
PMT1012 Computer Numerical Control Lab	8
*PMT2015 CNC Programming and NIMS	13
PMT1021 CAD/CAM Theory	5
PMT1022 CAD/CAM Lab	8
*PMT2115 CAD/CAM and Engineering Design	13

INDUSTRIAL ENGINEERING TECHNOLOGY

PERRYVILLE

ASSOCIATE OF TECHNOLOGY OR ASSOCIATE OF SCIENCE IN INDUSTRIAL ENGINEERING TECHNOLOGY (pg. 84)

The Industrial Engineering Technology (IET) program at Perryville offers the opportunity for students to enroll in a Department of Labor (DOL) approved apprenticeship for the occupation of industrial technician, with select employers. Students choosing this option receive credit for their coursework in the IET program and work towards completing the hourly requirement at a participating employer. After satisfying the terms of the apprenticeship, students will receive a certificate of completion from the Department of Labor.

INDUSTRIAL ENGINEERING TECHNOLOGY COURSES		HOURS	PREREQUISITE
First Semester	IET1100 Maintenance Operations	5	
	IET1105 Internship I	3	
	IET1110 Mechanical Systems	5	
	IET1115 Internship II	3	
Second Semester	IET1200 Hydraulic Systems	5	IET1100
	IET1205 Internship III	3	
	IET1210 Pneumatic Systems	5	
	IET1215 Internship IV	3	
Third Semester	IET1300 Electrical Systems	5	IET1100
	IET1305 Internship V	3	
	IET1310 Electronic Systems	5	
	IET1315 Internship VI	3	
Fourth Semester	IET1400 Electronic Controls	5	IET1100
	IET1405 Internship VII	3	
	IET1410 Electronic Process Control	5	
	IET1415 Internship VIII	3	
Fifth Semester	IET1500 Maintenance Welding	5	IET1100
	IET1505 Internship IX	3	
	IET1510 Maintenance Piping	5	
	IET1515 Internship X	3	

GENERAL EDUCATION COURSES			HOURS	PREREQUISITES
English/Social Sciences	ENG1101	College Composition I	3	Placement Exam or ENG1099
	ENG2102	College Composition II	3	ENG1101
	COM1105	Oral Communications	3	
	SOC1206	Principles of Sociology or	3	ENG1099 (Co. Req.)
	PSY1206	Introduction to Psychology	3	ENG1099 (Co. Req.)
Mathematics/Science	MTH1110	Elementary Algebra and MTH1111 Intermediate Algebra or	6	Placement Exam or MTH1099
	MTH1100	Elementary/Intermediate Algebra	3	Placement Exam
Business/Information Technology	BUS1000	Career Success Skills	3	
	MNG1204	Intro to Business & Management	3	ENG1099 (Co. Req.)
Associate of Science Additional Required Courses	MTH2112	College Algebra	3	MTH1100 or MTH1111
	MTH2220	Trigonometry	3	MTH2112
	PHY2230	College Physics	3	MTH2220
	MTH2240	Survey of Calculus	3	MTH2112

BACHELOR OF SCIENCE IN APPLIED MANAGEMENT

BACHELOR OF SCIENCE IN APPLIED MANAGEMENT (pg. 93)

The Bachelor of Science in Applied Management (BSAM) program is open to current Ranken students, Ranken graduates, or individuals with technical backgrounds. New BSAM students may enter the program with **as few as 24 technical credit hours from** previous Ranken courses, transferred technical credit, or prior learning assessment credit from a completed portfolio. ***There is no minimum technical credit hour requirement to start the BSAM program.**

GENERAL EDUCATION COURSES		HOURS
Business and Information Technology		
BUS1000	Career Success Skills	3
MNG1204	Intro to Business and Management	3
English, Social Sciences and Communications		
COM1105	Oral Communications	3
ENG1101	College Composition I	3
ENG2102	College Composition II	3
SOC1206	Principles of Sociology	3
	or	
PSY1206	Introduction to Psychology	3
Mathematics		
MTH1111	Intermediate Algebra	3
Program Requirement Total Credit Hours		124

EMPHASIS ADDED: BACHELOR OF SCIENCE IN APPLIED MANAGEMENT - ENTREPRENEURSHIP TRACK (pg. 93)

ENTREPRENEURSHIP PROGRAM COURSES		HOURS	PREREQUISITES
Technical Training			
RTC2500	Ranken Technical College Credits	1 to 40	
	or		
TEC2500	Technical Education College Credits	1 to 40	
COM3100	Organizational Communications	3	COM1105
MNG3100	Management & Supervision	3	MNG1204 or MNG1224
PSY3100	Organizational Behavior	3	SOC1206 or PSY1206
MNG3200	Human Resource Management	3	
MNG3250	Employment Law	3	MNG3200
MTH3113	Statistical Analysis	3	MTH1111 or MTH1100
COM3000	Intercultural Communications	3	COM1105
MNG3300	Managerial Accounting	3	MTH1111
MNG3350	Principles of Finance	3	MNG3300
MNG4110	Production & Operation Management	3	
MNG4250	Small Business Management	3	
PSY4000	Organizational Psychology	3	SOC1206 or PSY1206
MNG4020	Global Business Strategy	3	
MNG4200	Marketing Principles & Strategies	3	
MNG4253	Total Quality Management	3	MNG4110
MNG4252	Customer Relations Management	3	
ECO3205	Macroeconomics	3	
MNG4251	Negotiation Strategies for Entrepreneurs	3	
MNG4500	Capstone (Entrepreneurship Emphasis)	3	All Core Courses
POL3208	American Government	3	

BACHELOR OF SCIENCE IN APPLIED MANAGEMENT - FLEET MANAGEMENT TRACK (pg. 93)

FLEET MANAGEMENT PROGRAM COURSES		HOURS	PREREQUISITE
MNG4500	Capstone	3	All core management & business courses *MNG3300, MNG3350, MNG4200

RANKEN

TECHNICAL COLLEGE

Addendum - 1/8/2018 - New Program

The program information below is to be added to the Evening Program Certificate in Major Appliance Technology section of the catalog on page 51 of the 2017-2018 Catalog.

Major Appliance Technology - Perryville

Semester	Course	Hours	Pre-Requisites
First Semester	HVAO100 - Fundamentals of Heat Transfer & Domestic Applications	6	
Second Semester	HVAO101 - Electrical for HVACR	6	
Third Semester	HVAO230 - Residential HVAC & Heat Pumps	6	
Fourth Semester	MAT0250 - Laundry & Kitchen Applications	6	

HVAO100 Fundamentals of Heat Transfer and Domestic Applications

This course introduces the basics of refrigeration, including a description of what is taking place inside each component and the lines connecting them. Students learn to read a temperature/pressure chart and apply it to various refrigerants which are used in the trade. Common service procedures such as gauge installation, evacuation and recovery of refrigeration are also covered in the course. Students are exposed to trade measurements and are given theory behind what it takes to make a good solder and braze connection on copper tubing. This course introduces students to pressures, temperatures and running times for refrigerators and room air conditioners and continues with charging, service and operation of domestic refrigerators and room air conditioners. Six credit hours.

HVAO101 Electrical for HVACR

Study includes capacitors, current relays, potential relays and solidstate relays. Students practice methods used to recognize each relay and wire each relay circuit with its hermetic compressors. The course incorporates the wiring of basic fan relays, contactors and sequencers. Additionally, this course provides an overview of the different means of wiring, charging and problem diagnosis of domestic refrigerators and window air-conditioners. Troubleshooting through an electrical schematic is a staple of this course. Emphasis is placed on problem analysis of system operation. Six credit hours.

HVAO230 Residential HVAC and Heat Pumps

Introduction to heat pumps, including various types, specific components, basic operation and common problems. Both major types of refrigerants are used in the shop equipment. This provides each student with exposure to the current refrigerant and the newer non-ozone depleting refrigerant. Students are able to service an air conditioner and heat pump, troubleshoot the reversing valve and evaluate various defrost systems of a heat pump. Electric and gas furnaces are also covered. The prominent gas flame ignition devices and the various methods used to operate a gas furnace will be covered along with the

different equipment fuel efficiencies. Proper flue gas venting is also covered, primarily categories I and IV. Six credit hours.

MAT0250 - Laundry and Kitchen Appliances

This course introduces the student to installation and service of laundry equipment. Emphasis is placed on electric and gas dryers, as well as automatic washers. This course also introduces the student to installation and service of kitchen equipment. Emphasis is placed on ranges, dishwashers, compactors, and disposals. Upon completion, students should be able to install and service laundry equipment, gas and electric ranges, dishwashers and garbage disposals. Six credit hours.

RANKEN

TECHNICAL COLLEGE

Addendum - 1/8/2018 - New Program

The program information below is to be added to the Certificate of Technology portion of the Fabrication and Welding Technology section of the catalog on page 90 of the 2017-2018 Catalog.

Fabrication & Welding Technology - Perryville

Semester	Course	Hours	Pre-Requisites
First Semester	PFW1100 - Fundamentals of Welding Technology	7	
	PFW1110 - Blue Print Reading & Quality Inspection	3	
	PFW1105 - Internship I	5	
Second Semester	PFW1220 - Fabrication & Welding	10	PFW1100 & PFW1110
	PFW1205 - Internship II	5	
General Education Requirements	<u>English & Social Science:</u> COM1080 Technical Communications	3	
	<u>Business & Information Technology:</u> BUS1000 Career Success Skills	3	

PWF 1100 Fundamentals of Welding Technology

This course introduces students to welding and cutting processes in theory and in a shop environment. Students will receive an overview of various techniques, including Shield Metal Arc Welding (SMAW), Flux Cored Arc Welding (FCAW), Gas Metal Arc Welding (MIG/GMAW) and Gas Tungsten Arc Welding (TIG), that will be applied to various metals. Emphasis will be placed on developing proper welding techniques in all positions. Students will also learn the procedures for preparing materials, using oxy-fuel cutting and carbon arc gouging. By the end of the course, students will be prepared for the American Welding Society (AWS) certification test and vertical SMAW, MIG/ GMAW, and FCAW on steel plates. Seven credit hours.

PWF 1110 Blueprint Reading and Quality Inspection

This course offers an in-depth study of blueprint reading, basic weld inspection, construction math, and basic rigging. Students will gain a complete understanding of typical weld symbols and blueprints that are used throughout the welding industry. Three credit hours.

PWF1105 Internship I

Students are employed with a sponsor where they apply a variety of welding operations in a workplace setting. The work and equipment may vary by worksite, and may be located indoors or outdoors, depending on the sponsor. The work will be tracked and evaluated for credit. Five Credit Hours.

PWF 1220 Welding and Fabrication

This course builds upon skills and theories learned in the Fundamentals of Welding Technology course. Students will cut material with oxygen fuel cutting, carbon arc gouging and plasma cutting equipment. Students lay out, fabricate, fit, and assemble structural, boiler tube, and piping systems. Students will learn the necessary setup and operation of equipment used in the structural steel fabrication industry. Students will use blueprints to fabricate parts that are commonly found in the structural steel industry. Students will also learn to weld stainless steel and aluminum metals. Ten credit hours.

PWF 1205 Internship II

Students are employed with a sponsor where they apply a variety of welding operations in a workplace setting. The work and equipment may vary by worksite, and may be located indoors or outdoors, depending on the sponsor. The work will be tracked and evaluated for credit. Five credit hours.