



COLLEGE CATALOG 2021-2022

316.677.9400 | WSUTECH.EDU



Table of Contents

Mission, Vision and Values	6
Governance and Structure	7
Accreditation	7
Nondiscrimination	8
Educational Programs	8
Locations & Phone Numbers	10
Accounting, TC	12
Aerospace Coatings and Paint, TC	13
Aerospace Manufacturing Technology, AAS	14
Aerospace Manufacturing Technology, TC	15
Aerospace Quality Control, TC	16
Aerospace Tooling, TC	17
Airframe, TC	18
Alternative Fuel Vehicle Maintenance & Advanced Electronics, AAS	19
Alternative Fuel Vehicle Maintenance & Advanced Electronics, TC	20
Architectural Design Technology, AAS	21
Architectural Design Technology, TC	22
AutoCAD, COC	23
Automotive Technology, AAS	24
Automotive Technology - Night, TC	25
Automotive Technology, TC	26
Aviation Maintenance Technology, AAS	27
Aviation Maintenance Technology General, TC	28
Aviation Sheetmetal Assembly, TC	29
Business Administration, AAS	30
Carpentry Introduction, TC	31
Certified Flight Instructor, COC	32
Certified Medication Aide, COC	33
Certified Medication Aide Update, COC	34
Certified Nurse Aide, COC	35
Certified Nurse Aide Update, COC	36
Chief Architect, COC	37
Climate & Energy Control Technologies, AAS	38
Climate & Energy Control Technologies, TC	39

Table of Contents continued

Cloud Computing/Cloud Application Development, AAS	40
Cloud Computing/Cloud Application Development, TC	41
CNC Operator, TC	42
Commercial Pilot, COC	43
Composite Fabrication, COC	44
Composite Fabrication, TC	45
Composite Repair, COC	46
Composite Repair, TC	47
Composite Technology, AAS	48
Computer Support Specialist, AAS	49
Computer Support Specialist, TC	50
Construction Science, AAS	51
Construction Science, TC	52
Culinary Arts, AAS	53
Culinary Arts, TC	54
Dental Assistant, AAS	55
Dental Assistant, TC	56
Digital Marketing, AAS	57
Digital Marketing, TC	58
Eddy Current Technician, COC	59
Electrical Assembly, TC	60
Electronics Technology, AAS	61
Electronics Technology Avionics, TC	62
Electronics Technology Communications, TC	63
Electronics Technology Instrumentation, TC	64
Emergency Medical Services - High School, COC	65
Emergency Medical Services, TC	66
Emergency Medical Technician, COC	67
Engineering Design, COC	68
Engineering Design Technology, AAS	69
Engineering Design Technology, TC	70
Events Management, AAS	71
Events Management, TC	72
Food and Beverage Management, AAS	73
Food and Beverage Management, TC	74

Table of Contents continued

Fundamentals of Aerospace Manufacturing, TC	75
Healthcare Admin & Management, AAS	76
Home Health Aide, COC	77
Industrial Automation and Machine Maintenance, AAS	78
Industrial Automation and Machine Maintenance, TC	79
Information Technology Systems/Computer Support Specialist Emphasis in Cyber Security, AAS	80
Information Technology Systems/Computer Support Specialist Emphasis in Cyber Security, TC	81
Instrument Rating, COC	82
Interior Design, AAS	83
Interior Design Drafter, TC	84
Introduction to Manufacturing, COC	85
IT Essentials, TC	86
Kitchen & Bath Design, TC	87
Lodging Management, AAS	88
Lodging Management, TC	89
Logistics and Supply Chain Management, AAS	90
Logistics and Supply Chain Management, TC	91
Machining Technology, AAS	92
Machining Technology, TC	93
Magnetic Particle Technician, COC	94
Manual Machining, TC	95
Multiengine Pilot, COC	96
NC Programmer, COC	97
Nondestructive Testing, AAS	98
Nondestructive Testing, TC	99
Operations Management and Supervision, AAS	100
Operations Management and Supervision, COC	101
Operations Management, COC	102
Patient Care Technician, TC	103
Penetrant Technician, COC	104
Police Science, AAS	105
Police Science, COC	106
Police Science, TC	107

Table of Contents continued

Police Science Technical Studies, AAS	108
Powerplant, TC	109
Practical Nurse, TC	110
Private Pilot, COC	111
Private Security Officer Training, COC	112
Process Mechanic Painter, TC	113
Professional Pilot, AAS	114
Radiography Technician, COC	115
Robotics, AAS	116
Robotics, TC	117
Sheetmetal Apprenticeship, AAS	118
Surgical Technology, AAS	119
Tooling and Fixture Fabrication, AAS	120
Tooling and Fixture Fabrication, TC	121
Ultrasonic Technician, COC	122
Unmanned Aircraft, AAS	123
Unmanned Aircraft, TC	124
Veterinary Assistant, COC	125
Veterinary Nursing, AAS	126
Welding, AAS	127
Welding Fast Track GMAW, TC	128
Welding Fast Track SMAW, TC	129
Welding Fast Track, TC	130
Welding, TC	131
COURSE DESCRIPTIONS	132

WSU Tech has been delivering excellence in education since 1965. WSU Tech continues to build on this tradition with quality instructors, talented students and state-of-the-art technical equipment. Together, these elements help create a hands-on learning environment that promotes participation and prepares students for further education and/or career experiences.

Mission, Vision and Values

Mission

The mission of WSU Tech is to provide quality higher education and leadership in workforce training that supports economic development for a global economy.

Vision

WSU Tech will be the leading provider of higher education, specializing in the delivery of career technical education, utilizing state of-the-art facilities with highly qualified faculty, and offering a competitive advantage that drives economic development in the region.

Values

To achieve our vision and fulfill our mission, WSU Tech has embraced the following values:

Accountability: WSU Tech values the resources entrusted to it and will use them responsibly to support the college's mission.

Quality: WSU Tech values an environment of professionalism and excellence for students, faculty, and staff to learn and work.

Innovation: WSU Tech values cutting-edge technology and delivery methods to encourage lifelong learning within a rapidly changing society.

Customer Service: WSU Tech values its customers as it strives to exceed their expectations, while responding to the needs of its various constituents.

Equity/Diversity: WSU Tech values the diverse nature of its students, faculty and staff and seeks to treat each person with the utmost respect.

Global Professional Standards: WSU Tech values and practices behaviors that promote responsible, successful, and ethical students, employees and citizens.

Governance and Structure

Kansas Board of Regents

The Kansas Board of Regents (KBOR) is comprised of nine members who are appointed by the governor of Kansas and confirmed by the Kansas Senate. KBOR governs six state universities and supervises and coordinates 19 community colleges, six technical colleges and a municipal university.

KBOR primarily deals with educational policies, programs, services, providers and other systems in an effort to improve and maintain the high quality of education in Kansas. KBOR also coordinates vital programs, such as adult literacy, qualified admissions, concurrent enrollment for high school students, financial assistance for education and many others. KBOR, in conjunction with the Kansas Postsecondary Technical Education Authority, approves technical programs offered by WSU Tech.

Sedgwick County Technical Education and Training Authority

Sedgwick County Technical Education and Training Authority (SCTETA) is the governing board for WSU Tech. The board consists of 11 appointed, voting members who establish and publish policies, regulations and procedures pertaining to WSU Tech.

Accreditation

The Higher Learning Commission – North Central Association

The Higher Learning Commission (HLC) is part of the North Central Association (NCA) of Colleges and Schools. NCA is one of six regional institutional accreditors in the United States. Through its Commissions, it accredits and thereby grants membership to educational institutions in the North Central region.

WSU Tech is fully accredited by The Higher Learning Commission and a member of the North Central Association as of October 2008.

The Higher Learning Commission
230 South LaSalle Street, Suite 7-500 Chicago, IL 60604-1411
Phone: 800.621.7440 / 312.263.0456
Fax: 312.263.7462
ncahlc.org

Nondiscrimination

WSU Tech does not discriminate with regard to race, color, national origin, sex, handicap/disability, religion or age. Persons having inquiries may contact the Human Resources director, 4004 N. Webb Rd, Wichita, KS 67226, 316.677.9400.

WSU Tech intends to comply with all applicable federal, state and local laws and regulations, including but not limited to: the Civil Rights Act of 1964, as amended; the Americans With Disabilities Act of 1990; the Age Discrimination in Employment Act of 1967; the Drug-Free Schools and Campuses Act; the Campus Security Act (Jeanne Cleary Act), as amended; the Family Educational Rights and Privacy Act of 1974, as amended; and the Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance rules.

Persons having inquiries may contact the Human Resources director, 4004 N. Webb Rd, Wichita, KS 67226, 316.677.9400.

Educational Programs

Students have many educational opportunities at WSU Tech and are encouraged to select the program or course of study that best meets their needs. These opportunities include general education courses and associate of applied science (AAS) degrees, technical certificates of completion. Students may also opt to select courses that focus on particular technical skills instead of registering in a complete program.

Associate of Applied Science Degrees

AAS degree programs are designed to provide students with the knowledge and skills needed to enter the workforce, advance within their chosen careers or further their education. To be awarded the AAS degree, students must successfully complete a minimum of 60 credit hours – a combination of technical and general education hours.

Although AAS degrees are designed to prepare students for employment, technical credits may transfer to other colleges or universities. The Vice President, Academic Affairs may approve alternative general education courses and acceptance of transfer credits or work experience.

General Education

WSU Tech's philosophy and approach to general education promotes the appreciation for lifelong learning necessary to support the professional, academic, and personal success of students. Every degree program incorporates general education courses designed to prepare students with a foundation in computers, written and verbal communication, mathematics, natural sciences and social sciences. These themes are also integrated and applied through the core curriculum in WSU Tech's technical certificate programs.

WSU Tech provides general education courses required for its degree programs. These courses are taught with curricula that meet or exceed state core curriculum standards approved by KBOR and are taught by instructors with the appropriate credentials. WSU Tech's general education courses that lead to the AAS degree are interspersed throughout the program with various instructional delivery methods that allow flexibility for student schedules.

WSU Tech's technical coursework provides a knowledge base in the application of natural sciences and fosters a tendency to think using an analytical and problem-solution approach; however, what students learn in technical courses is not the only knowledge they need nor is it the only way of thinking. Students will encounter people in their professional and personal lives that will challenge them in other ways – politically, aesthetically, emotionally and morally. General education courses are designed to support and further students' comfort level in dealing with differing opinions and appreciating other ways of thinking.

Technical Certificates

Technical certificate programs provide the knowledge and skills needed to enter the workforce. Students who wish to pursue an AAS degree may transfer most of these courses and credits to an AAS degree program at WSU Tech.

Certificates of Completion

Certificate of Completion programs provide the knowledge and skills required in today's competitive and changing workforce. Programs vary in length from a few days to several months.

Policies and Procedures

Chapter 1	Organization
Chapter 2	Personnel Policies
Chapter 3	Students
Chapter 4	Fiscal
Chapter 5	Academic
Chapter 6	Buildings and Grounds
Chapter 7	Safety and Security
Chapter 8	Marketing
Chapter 9	Information Technology
Chapter 10	Foundation and Grants
Chapter 11	Workforce

Skills USA Fee

All students enrolled in the following programs are assessed a mandatory fee for Skills USA:

Automotive Service Technology, Climate and Energy Control Technologies (HVAC), Aviation Maintenance Technology, Machining Technology, Construction Science, Architectural Design Technology, Engineering Design Technology, Welding, Police Science.

Locations & Phone Numbers

General Information	316.677.9400
Fax	316.677.9555
Website	wsutech.edu
Emergency Closing Hotline	316.677.9596

NATIONAL CENTER FOR AVIATION TRAINING/JABARA

4004 N. Webb Road | Wichita, KS 67226 | 316.677.9400

General Information	316.677.9400
Academic Success/Tutoring	316.677.9440
Admissions	316.677.9400
Bookstore	316.677.9459
Business Office	316.677.9511
Disability Services/Accommodation Requests	316.677.1912
Financial Aid	316.677.9400
Online Learning	316.677.9400
Registrar	316.677.9400
Student IT Helpdesk	316.677.9906
Student Success Services/Career Services	316.677.9520
Testing Services	316.677.9506
Workforce Education and Development	316.677.1404

WSU SOUTH

3821 E. Harry | Wichita, KS | 67218 | 316.677.9400

General Information	316.677.1500
Academic Success/Tutoring	316.677.9440
Admissions	316.677.9400
Bookstore	316.677.9459
Business Office	316.677.1941
Disability Services/Accommodation Requests	316.677.1912
Financial Aid	316.677.9400
Library	316.677.9492
Online Learning	316.677.9400
Registrar	316.677.9400
Student Success Services/Career Services	316.677.9520
Testing Services	316.677.9492

CITY CENTER CAMPUS

301 S. Grove | Wichita, KS 67211 | 316.677.9400

Adult Literacy/GED	316.677.1150
General Information	316.677.9440

WSU OLD TOWN

213 N. Mead | Wichita, KS | 67202 | 316.677.9400

General Information	316.677.9400
Academic Success/Tutoring	316.677.9440
Admissions	316.677.9400
Business Office	316.677.9511
Disability Services/Accommodation Requests	316.677.1912
Financial Aid	316.677.9400
Student IT Helpdesk	316.677.9906
Student Success Services/Career Services	316.677.9520

Additional Instructional Sites

WSU Haysville

106 Stewart Avenue | Haysville, KS | 67060 | 316.677.9400

WSU West

3801 N Walker Avenue | Maize, KS | 67101 | 316.677.9400

WSU Advanced Education in General Dentistry (AEGD)

2838 N. Oliver | Wichita, KS | 67220 | 316.677.9400

McConnell Air Force Base

Robert J. Dole Community Center

53474 Lawrence Ct | McConnell AFB | KS 67221



PROGRAMS OF STUDY

Accounting, TC

CRN	COURSE NAME	CREDITS
ACC 105	Fundamentals of Accounting	3
ACC 130	Managerial Accounting	3
ACC 160	Principles of Accounting I	3
ACC 170	Principles of Accounting II	3
BUS 104	Introduction to Business	3
BUS 130	Personal Finance	3
BUS 137	Introduction to QuickBooks	3
BUS 200	Principles of Management	3
CED 115	Computer Applications	3
ECO 105	Principles of Macroeconomics	3
ECO 110	Principles of Microeconomics	3
ENG 101	Composition I	3
MTH 112	College Algebra	3
MTH 120	Elementary Statistics	3
SPH 101	Public Speaking	3
Total		45.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$6,748.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Aerospace Coatings and Paint Technology, TC

CRN	COURSE NAME	CREDITS
ACP 100	Introduction to Coatings & Paint Technology	3
ACP 101	Surface Preparation & Coatings	4
ACP 102	Performance & Durability of Coatings	3
ACP 103	Color Technology	3
ACP 104	Specialized Coating Processes	3
ACP 105	Specialized Detailing	3
ACP 106	Aerospace Coatings & Materials	3
ACP 107	Aerospace Program Management	3
ACP 111	Technical Co-Operative Project	4
AVC 102	Precision Instruments	1
AVC 103	Geometric Dimensioning & Tolerancing	1
AVC 104	Quality Control Concepts	1
AVC 105	Aircraft Familiarization	1
AVC 107	Fundamentals for Aerospace Manufacturing	1
AVC 108	Aircraft Systems & Components	4
AVC 110	Safety/OSHA 10	1
AVC 112	Blueprint Reading	2
CED 101	Computer Essentials	2
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
Total		48.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$11,497.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Aerospace Manufacturing Technology, AAS

CRN	COURSE NAME	CREDITS
Technical Electives - 40		40
CED 115	Computer Applications	3
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
Communication Elective		3
Math Elective		3
Science Elective		5
Social Science Elective		3
Technical Elective		
ACP 100	Introduction to Coatings & Paint Technology	
ACP 101	Surface Preparation & Coatings	
ACP 104	Specialized Coating Processes	
AER 106	Aerospace Manufacturing Tooling Orientation	
AER 111	Tap and Die	
AER 115	Aerostructures Assembly	
AER 116	Hand Power Tools for Aerospace Tooling	
AER 126	Tooling Capstone	
AER 135	Quality Assurance Orientation	
AER 150	Assembly Overview I	
AER 155	Aerospace Plumbing	
AER 165	Electrical Assembly Mechanic Orientation	
AER 166	Electrical Hand Tools	
AER 167	Drilling & Riveting/Ground Stud Installation	
AER 168	Wire Installation Drawings	
AER 169	Crimping & Cables	
AER 170	Fiber Optics for Aerospace	
AER 175	Wire Bundle Basics	
AER 180	Soldering	
AER 185	Wire Bundle Installation	
ARU 110	Composite Fabrication	
ARU 115	Sheetmetal Assembly	
ARU 120	Composite Repair I	
ARU 125	Advanced Assembly	
ARU 130	Electrical Assembly	
ARU 135	Electronics Basics	
ARU 140	Composite Repair II	
ARU 145	Machining Basics	
ARU 150	Advanced Measuring Instruments	
ARU 155	Aerospace Paint	
ARU 160	Process Mechanic	
ARU 165	Aviation Fundamentals of Quality	
ARU 170	Aviation Assembly Core	
AVC 102	Precision Instruments	
AVC 103	Geometric Dimensioning & Tolerancing	
AVC 104	Quality Control Concepts	
AVC 105	Aircraft Familiarization	
AVC 107	Fundamentals for Aerospace Manufacturing	
AVC 108	Aircraft Systems & Components	
AVC 110	Safety/OSHA 10	
AVC 112	Blueprint Reading	
AVC 120	Introduction to Sealing	
AVC 125	Bonding and Grounding	
AVC 127	Aviation Assembly Core	
AVC 135	Hand Tools	
AVC 140	Electrical Bonding & Grounding	
AVC 145	Power Island	
AVC 150	Human Factors	
AVC 165	Technical Writing	
AVC 170	Conflict Resolution	
BUS 121	Business Communications	
CFT 101	Introduction to Composites	
CFT 106	Composite Finish Trim	
CFT 107	Composite Assembly	
CFT 130	Composite Fabrication Methods /Applications	
CFT 135	Overview of Composite Inspection	
CFT 140	Composite Inspection	
CWG 110	Welding Applications	
CWG 105	Welding Safety & Orientation	
LEN 100	Lean for Operations	
MCD 106	Precision Measuring	
MCD 137	Introduction to 3D Printing	
NDT 114	Visual Inspection	
Total		62.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$13,161.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Aerospace Manufacturing Technology, TC

CRN	COURSE NAME	CREDITS
AER 115	Aerostructures Assembly	6
AVC 103	Geometric Dimensioning & Tolerancing	1
AVC 105	Aircraft Familiarization	1
AVC 107	Fundamentals for Aerospace Manufacturing	1
AVC 108	Aircraft Systems & Components	4
AVC 125	Bonding and Grounding	1
AVC 135	Hand Tools	1
AVC 145	Power Island	1
AVC 150	Human Factors	1
AVC	Aviation Assembly Core	7
CFT 101	Introduction to Composites	2
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
Aviation Core		
AVC 127	Aviation Assembly Core - or all of the following courses	
AVC 102	Precision Instruments	
AVC 104	Quality Control Concepts	
AVC 110	Safety/OSHA 10	
AVC 112	Blueprint Reading	
AVC 120	Introduction to Sealing	
AVC 140	Quality Control Concepts	
Total		31.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$8,142.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Aerospace Quality Control, TC

CRN	COURSE NAME	CREDITS
AER 135	Quality Assurance Orientation	1
AER 150	Assembly Overview I	3
AER 155	Aerospace Plumbing	2
AER 168	Wire Installation Drawings	1
AER 169	Crimping & Cables	2
AER 175	Wire Bundle Basics	1
AVC 102	Precision Instruments	1
AVC 103	Geometric Dimensioning & Tolerancing	1
AVC 104	Quality Control Concepts	1
AVC 105	Aircraft Familiarization	1
AVC 107	Fundamentals for Aerospace Manufacturing	1
AVC 108	Aircraft Systems & Components	4
AVC 110	Safety/OSHA 10	1
AVC 112	Blueprint Reading	2
AVC 120	Introduction to Sealing	1
AVC 125	Bonding and Grounding	1
AVC 135	Hand Tools	1
AVC 165	Technical Writing	1
AVC 170	Conflict Resolution	1
CFT 101	Introduction to Composites	2
CFT 135	Overview of Composite Inspection	1
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
	Communication Elective	3
Total		38.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$8,382.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Aerospace Tooling, TC

CRN	COURSE NAME	CREDITS
AER 106	Aerospace Manufacturing Tooling Orientation	1
AER 111	Tap and Die	1
AER 116	Hand and Power Tools for Aerospace Tooling	1
AER 126	Tooling Capstone	4
AER 150	Assembly Overview I	3
AVC 102	Precision Instruments	1
AVC 103	Geometric Dimensioning & Tolerancing	1
AVC 104	Quality Control Concepts	1
AVC 105	Aircraft Familiarization	1
AVC 107	Fundamentals for Aerospace Manufacturing	1
AVC 110	Safety/OSHA 10	1
AVC 112	Blueprint Reading	2
AVC 120	Introduction to Sealing	1
AVC 125	Bonding and Grounding	1
AVC 135	Hand Tools	1
AVC 145	Power Island	1
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
Total		27.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$6,093.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Airframe, TC

CRN	COURSE NAME	CREDITS
AMT 105	Technical Mathematics	2
AMT 107	Aircraft Drawings	1
AMT 109	Physics	2
AMT 111	Materials & Processes	3
AMT 112	Assembly & Rigging	3
AMT 113	Basic Electricity	4
AMT 115	Weight & Balance	2
AMT 120	Airframe Inspection	3
AMT 123	Cleaning & Corrosion Control	1
AMT 125	Fluid Lines & Fittings	1
AMT 127	Ground Operations & Servicing	1
AMT 131	General Review & Test	
AMT 133	Regulations, Research & Documentation	3
AMT 151	Aircraft Electrical Systems	5
AMT 153	Hydraulic & Pneumatic Power Systems	2
AMT 154	Landing Gear, Position, & Warning Systems	3
AMT 159	Aircraft Fuel Systems	2
AMT 165	Cabin Atmosphere Control Systems	2
AMT 166	Fire, Ice & Rain Control	1
AMT 167	Aircraft Welding	1
AMT 172	Communication, Navigation, & Instruments	2
AMT 179	Aircraft Sheet Metal & Non-Metallic Structures	8
AMT 182	Aircraft Coverings and Finishes	2
AMT 186	Airframe Review & Test	2
PDV 105	Blueprint for Personal Success	2
Total		58.00

All AMT program students are required to purchase tool kits via WSU Tech. This purchase will be made in the Airframe 2 and PowerPlant 2 semesters of the program. Tools may not be purchased outside of WSU Tech.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$18,521.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Alternative Fuel Vehicle Maintenance & Advanced Electronics , AAS

CRN	COURSE NAME	CREDITS
AFV 110	Electrical I	3
AFV 120	Electrical II	5
AFV 125	Manual Transmission/Transaxle & Drive Train	4
AFV 130	Suspension and Steering I	3
AFV 135	Introduction to Alternative Fuels	3
AFV 140	Engine Repair	4
AFV 145	Hybrid Systems & Maintenance	3
AFV 150	Electric/Fuel Cell Technology	1
AFV 155	High Voltage Battery Technology & Management	3
AFV 160	Brakes I	3
AFV 165	Introduction to CNG and LPG Conversion, Installation & Maintenance	1
AFV 170	Automotive Computer Systems	3
AFV 175	Automatic Transmission Repair	4
AFV 180	Heating & Air Conditioning	4
CED 115	Computer Applications	3
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
	Communication Elective	3
	Math Elective	3
	Social Science Elective	3
Total		61.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$12,017.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

Alternative Fuel Vehicle Maintenance & Advanced Electronics , TC

CRN	COURSE NAME	CREDITS
AFV 110	Electrical I	3
AFV 120	Electrical II	5
AFV 125	Manual Transmission/Transaxle & Drive Train	4
AFV 130	Suspension and Steering I	3
AFV 135	Introduction to Alternative Fuels	3
AFV 140	Engine Repair	4
AFV 145	Hybrid Systems & Maintenance	3
AFV 150	Electric/Fuel Cell Technology	1
AFV 155	High Voltage Battery Technology & Management	3
AFV 160	Brakes I	3
AFV 165	Introduction to CNG and LPG Conversion, Installation & Maintenance	1
AFV 170	Automotive Computer Systems	3
AFV 175	Automatic Transmission Repair	4
AFV 180	Heating & Air Conditioning	4
PDV 105	Blueprint for Personal Success	2
Total		46.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$9,907.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Architectural Design Technology, AAS

CRN	COURSE NAME	CREDITS
MCD 101	Introduction to CAD I	3
MCD 102	Introduction to CAD II	2
MCD 104	Blueprint Reading for Drafting	2
MCD 106	Precision Measuring	2
MCD 112	Industrial Materials & Processes	2
MCD 114	Architectural Drafting & Design	3
MCD 115	Machine Drafting & Design	3
MCD 121	Descriptive Geometry	3
MCD 122	Architectural CAD	4
MCD 124	Advanced AutoCAD	4
MCD 132	Basic Chief Architect/Architectural Desktop	3
MCD 134	Advanced Chief Architect/Architectural Desktop	3
MCD 205	Residential Drafting	3
MCD 206	Commercial Drafting & Design	3
MCD	Technical Elective 3 Credits	3
CED 115	Computer Applications	3
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
	Communication Elective	3
	Math Elective	3
	Social Science Elective	3
Technical Elective		
CAT 101	CATIA Parts Design & Sketcher	
MCD 130	Basic Solidworks	
MCD 133	Advanced Solidworks	
MCD 137	Introduction to 3D Printing	
MCD 140	Drafting Internship	
MCD 210	Advanced Measuring	
Total		60.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$12,557.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Architectural Design Technology, TC

CRN	COURSE NAME	CREDITS
MCD 101	Introduction to CAD I	3
MCD 102	Introduction to CAD II	2
MCD 104	Blueprint Reading for Drafting	2
MCD 106	Precision Measuring	2
MCD 112	Industrial Materials & Processes	2
MCD 114	Architectural Drafting & Design	3
MCD 115	Machine Drafting & Design	3
MCD 121	Descriptive Geometry	3
MCD 122	Architectural CAD	4
MCD 124	Advanced AutoCAD	4
MCD 132	Basic Chief Architect/Architectural Desktop	3
MCD 134	Advanced Chief Architect/Architectural Desktop	3
CED 101	Computer Essentials	2
PDV 105	Blueprint for Personal Success	2
	Communication Elective	3
	Math Elective	3
Total		44.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$9,420.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

AutoCAD, COC

CRN	COURSE NAME	CREDITS
MCD 101	Introduction to CAD I	3
MCD 102	Introduction to CAD II	2
MCD 124	Advanced AutoCAD	4
PDV 105	Blueprint for Personal Success	2
	Math Elective	3
Total		14.00

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$2,716.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

Automotive Technology, AAS

CRN	COURSE NAME	CREDITS
-----	-------------	---------

TAS	124	Electrical I	3
TAS	125	Electrical II	5
TAS	126	Manual Transmission/Transaxle & Drive Train	4
TAS	127	Automatic Transmission Repair	4
TAS	128	Heating & Air Conditioning	4
TAS	131	Engine Performance I	3
TAS	133	Brakes I	3
TAS	134	Brakes II	1
TAS	136	Suspension and Steering I	3
TAS	137	Suspension and Steering II	2
TAS	Auto Service or Diesel Electives - 9 Credits		9
TAS	Technical Electives - 3 Credits		3
CED	115	Computer Applications	3
ENG	101	Composition I	3
PDV	105	Blueprint for Personal Success	2
		Communication Elective	3
		Math Elective	3
		Social Science Elective	3
Auto Service Electives			
TAS	121	Engine Repair	
TAS	132	Engine Performance II	
Diesel Electives			
TAS	140	Diesel Engine Repair	
TAS	142	Diesel Engine Performance	
Technical Electives			
TAS	135	Automotive Computer Systems	
TAS	145	Automotive Service Internship	
Total			61.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$11,597.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Automotive Technology - Night, TC

CRN	COURSE NAME	CREDITS
TAS 121	Engine Repair	4
TAS 124	Electrical I	3
TAS 125	Electrical II	5
TAS 126	Manual Transmission/Transaxle & Drive Train	4
TAS 127	Automatic Transmission Repair	4
TAS 128	Heating & Air Conditioning	4
TAS 131	Engine Performance I	3
TAS 132	Engine Performance II	5
TAS 133	Brakes I	3
TAS 134	Brakes II	1
TAS 136	Suspension and Steering I	3
TAS 137	Suspension and Steering II	2
TAS	Technical Elective - 3 Credits	3
CED 101	Computer Essentials	2
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
Technical Electives		
TAS 135	Automotive Computer Systems	
TAS 145	Automotive Service Internship	
Total		51.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$10,228.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Automotive Technology, TC

CRN	COURSE NAME	CREDITS
TAS 124	Electrical I	3
TAS 125	Electrical II	5
TAS 126	Manual Transmission/Transaxle & Drive Train	4
TAS 127	Automatic Transmission Repair	4
TAS 128	Heating & Air Conditioning	4
TAS 131	Engine Performance I	3
TAS 133	Brakes I	3
TAS 134	Brakes II	1
TAS 136	Suspension and Steering I	3
TAS 137	Suspension and Steering II	2
	Auto Service or Diesel Elective - 9 Credits	9
	Technical Elective - 3 Credits	3
CED 101	Computer Essentials	2
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
	Auto Service Electives	
TAS 121	Engine Repair	
TAS 132	Engine Performance II	
	Diesel Electives	
TAS 140	Diesel Engine Repair	
TAS 142	Diesel Engine Performance	
	Technical Electives	
TAS 135	Automotive Computer Systems	
TAS 145	Automotive Service Internship	
Total		51.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$10,236.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Aviation Maintenance Technology, AAS

CRN	COURSE NAME	CREDITS
AMT 105	Technical Mathematics	2
AMT 107	Aircraft Drawings	1
AMT 109	Physics	2
AMT 111	Materials & Processes	3
AMT 112	Assembly & Rigging	3
AMT 113	Basic Electricity	4
AMT 115	Weight & Balance	2
AMT 120	Airframe Inspection	3
AMT 123	Cleaning & Corrosion Control	1
AMT 125	Fluid Lines & Fittings	1
AMT 127	Ground Operations & Servicing	1
AMT 131	General Review & Test	
AMT 133	Regulations, Research & Documentation	3
AMT 136	Propellers	3
AMT 151	Aircraft Electrical Systems	5
AMT 153	Hydraulic & Pneumatic Power Systems	2
AMT 154	Landing Gear, Position, & Warning Systems	3
AMT 159	Aircraft Fuel Systems	2
AMT 165	Cabin Atmosphere Control Systems	2
AMT 166	Fire, Ice & Rain Control	1
AMT 167	Aircraft Welding	1
AMT 172	Communication, Navigation, & Instruments	2
AMT 179	Aircraft Sheet Metal & Non-Metallic Structures	8
AMT 182	Aircraft Coverings and Finishes	2
AMT 186	Airframe Review & Test	2
AMT 200	Reciprocating Engines	7
AMT 210	Engine Fuel Systems	3
AMT 212	Engine Ignition, Starting and Electrical Systems	5
AMT 213	Engine Lubrication Systems	2
AMT 218	Engine Airflow and Fire Protection Systems	3
AMT 224	Engine Maintenance and Operation	5
AMT 227	Turbine Engines	6
AMT 231	Powerplant Review & Test	2
CED 115	Computer Applications	3
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
SPH 111	Interpersonal Communication	3
	Math Elective	3
	Social Science Elective	3
Total		109.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$32,375.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

All AMT program students are required to purchase tool kits via WSU Tech. This purchase will be made in the Airframe 2 and PowerPlant 2 semesters of the program. Tools may not be purchased outside of WSU Tech.

Aviation Maintenance Technology General, TC

CRN	COURSE NAME	CREDITS
AMT 105	Technical Mathematics	2
AMT 107	Aircraft Drawings	1
AMT 109	Physics	2
AMT 111	Materials & Processes	3
AMT 113	Basic Electricity	4
AMT 115	Weight & Balance	2
AMT 123	Cleaning & Corrosion Control	1
AMT 125	Fluid Lines & Fittings	1
AMT 127	Ground Operations & Servicing	1
AMT 131	General Review & Test	
AMT 133	Regulations, Research & Documentation	3
Total		20.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$6,128.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Aviation Sheetmetal Assembly, TC

CRN	COURSE NAME	CREDITS
AER 115	Aerostructures Assembly	6
AVC 127	Aviation Assembly Core	7
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
Total		18.00

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$3,680.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

Business Administration, AAS

CRN COURSE NAME CREDITS

ACC	105	Fundamentals of Accounting	3
ACC	130	Managerial Accounting	3
ACC	160	Principles of Accounting I	3
ACC	170	Principles of Accounting II	3
BUS	104	Introduction to Business	3
BUS	140	Principles of Marketing	3
BUS	180	Business Internship	3
BUS	200	Principles of Management	3
CED	115	Computer Applications	3
ECO	105	Principles of Macroeconomics	3
ECO	110	Principles of Microeconomics	3
ENG	101	Composition I	3
ENG	120	Composition II	3
ENT	110	Introduction to Entrepreneurship	3
MTH	112	College Algebra	3
MTH	120	Elementary Statistics	3
PHL	115	Logic	3
PSY	101	General Psychology	3
SPH	101	Public Speaking	3
Electives - 6 Credits			6

Electives

BUS	121	Business Communication	
BUS	125	Business Law	
BUS	130	Personal Finance	
BUS	135	Introduction to Public Relations	
BUS	137	Introduction to QuickBooks	
OPM	115	Introduction to Project Management	

Total **63.00**

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$9,272.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Carpentry Introduction, TC

CRN	COURSE NAME	CREDITS
CCP 100	Introductory Craft Skills	3
CCP 105	Carpentry Basics	4
CCP 110	Floors, Walls, & Ceiling Framing	4
CCP 115	Roof Framing	3
CCP 120	Windows, Doors, & Stairs	3
SAF 101	Safety Orientation/OSHA 10	1
Total		18.00

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$4,928.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Certified Flight Instructor, COC

CRN	COURSE NAME	CREDITS
PLT 176	Certified Flight Instruction Lab	1
PLT 168	Certified Flight Instruction	5
Total		6.00

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$2,265.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

Certified Medication Aide, COC

CRN	COURSE NAME	CREDITS
GRA 119	Medication Aide	5
Total		5.00

LOCATION

Old Town
213 N. Mead | Wichita, KS 67202
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$902.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

Certified Medication Aide Update, COC

CRN	COURSE NAME	CREDITS
MDU 010	Medication Aide Update	1
Total		1.00

LOCATION

Old Town

213 N. Mead | Wichita, KS 67202

316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL

\$141.00

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

Certified Nurse Aide, COC

CRN	COURSE NAME	CREDITS
GRA 101	Certified Nurse Aide	5
Total		5.00

LOCATION

Old Town
213 N. Mead | Wichita, KS 67202
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$857.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

Certified Nurse Aide Update, COC

CRN	COURSE NAME	CREDITS
-----	-------------	---------

CNU 010	Certified Nurse Aide Update	1
Total		1.00

LOCATION

Old Town
213 N. Mead | Wichita, KS 67202
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$230.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

Chief Architect, COC

CRN	COURSE NAME	CREDITS
MCD 112	Industrial Materials & Processes	2
MCD 132	Basic Chief Architect/Architectural Desktop	3
MCD 134	Advanced Chief Architect/Architectural Desktop	3
PDV 105	Blueprint for Personal Success	2
	Math Elective	3
Total		13.00

LOCATION

National Center for Aviation Training
4004 North Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$2,589.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

Climate & Energy Control Technologies, AAS

CRN	COURSE NAME	CREDITS
ACR 112	HVAC Fundamentals	4
ACR 113	Electrical Fundamentals	4
ACR 116	Workplace Skills	1
ACR 117	Intro to Mechanical Refrigeration	4
ACR 118	Electrical Fundamentals II	3
ACR 119	Advanced Electrical Theory for HVAC	2
ACR 121	Heating System Fundamentals	3
ACR 122	Heating System Fundamentals II	2
ACR 123	Heat Loads and Duct Sizing	2
ACR 124	Advanced Heating Systems	3
ACR 126	EPA 608	1
ACR 127	Heat Pumps	3
ACR 128	Commercial HVAC	4
ACR 129	Commercial HVAC Lab	4
ACR 140	Sheet Metal Fabrication I	3
CCP 100	Introductory Craft Skills	3
SAF 101	Safety Orientation/OSHA 10	1
CED 115	Computer Applications	3
ENG 101	Composition I	3
	Communication Elective	3
	Math Elective	3
	Social Science Elective	3
Total		62.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$12,717.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Climate & Energy Control Technologies, TC

CRN	COURSE NAME	CREDITS
ACR 112	HVAC Fundamentals	4
ACR 113	Electrical Fundamentals	4
ACR 116	Workplace Skills	1
ACR 117	Intro to Mechanical Refrigeration	4
ACR 118	Electrical Fundamentals II	3
ACR 119	Advanced Electrical Theory for HVAC	2
ACR 121	Heating System Fundamentals	3
ACR 122	Heating System Fundamentals II	2
ACR 123	Heat Loads and Duct Sizing	2
ACR 124	Advanced Heating Systems	3
ACR 126	EPA 608	1
ACR 127	Heat Pumps	3
ACR 128	Commercial HVAC	4
ACR 129	Commercial HVAC Lab	4
ACR 140	Sheet Metal Fabrication I	3
SAF 101	Safety Orientation/OSHA 10	1
Total		44.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$10,059.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Cloud Computing/Cloud Application Development, AAS

CRN	COURSE NAME	CREDITS
INF 113	Introduction to Programming	3
INF 118	Cloud Fundamentals	3
INF 121	Object-Oriented Programming (JavaScript)	3
INF 122	Introduction to Web Development	3
INF 126	Test Driven Development (JavaScript)	3
INF 131	Continuous Integration Continuous Deployment - CICD	3
INF 143	Web Application Development I (HTML/CSS)	3
INF 152	Web Application Development II (REACT)	3
INF 158	Multi-Cloud Development Services	3
INF 166	Cloud Application Development I (REACT on AWS)	3
INF 170	Cloud Application Development II (Serverless REACT on AWS)	3
INF	Information Technology Electives -12 Credits	12
INF	Experiential Learning Electives - 3 Credits	3
CED 115	Computer Applications	3
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
	Communication Elective	3
	Math Elective	3
	Social Science Elective	3
	Experiential Learning Electives	
INF 174	Information Technology Capstone	
INF 175	Information Technology Internship	
	Information Technology Electives	
INF 105	A+ Certification - Essentials	
INF 110	A+ Certification - Application	
INF 112	Network Essentials	
INF 113	Introduction to Programming	
INF 115	Network+ Part I	
INF 116	Network+ Part II	
INF 118	Cloud Fundamentals	
INF 120	Security+	
INF 121	Object-Oriented Programming (JavaScript)	
INF 122	Introduction to Web Development	
INF 126	Test Driven Development (JavaScript)	
INF 127	Linux+ Part I	
INF 128	Linux+ Part II	
INF 131	Continuous Integration Continuous Delivery - CICD	
INF 134	Server	
INF 136	Powershell	
INF 138	Object -Oriented Programming (Python)	
INF 141	Test Driven Development (Python)	
INF 142	Introduction to Storage Solutions	
INF 143	Web Application Development I (HTML/CSS)	
INF 147	Website Production & Web Management	
INF 152	Web Application Development II (REACT)	
INF 153	Multi-Cloud Administration	
INF 155	Digital Forensics	
INF 157	Cyber Law and Ethics	
INF 158	Multi-Cloud Development Services	
INF 160	Server Security	
INF 161	Introduction to Networks	
INF 164	Switching, Routing, and Wireless Essentials	
INF 165	Advanced Cyber Security	
INF 166	Cloud Application Development I (REACT on AWS)	
INF 167	Enterprise Networking, Security, and Automation	
INF 168	AWS Cloud Practitioner	
INF 169	Machine Learning and AI Foundations with Predictive Analytics	
INF 170	Cloud Application Development II (Serverless REACT on AWS)	
INF 177	AWS Solutions Architect Associate	
INF 180	Advanced Network Security	
INF 182	Microsoft Azure Administrator	
INF 185	Virtual Private Cloud Administration	
INF 187	Cloud Native Infrastructure (Kubernetes)	
INF 188	Cloud Data and DevOps Specialist (AWS)	
INF 191	Microsoft Enterprise O365 Administration	
INF 193	Cloud DevOps Engineer I	
INF 196	Cloud DevOps Engineer II	
INF	Virtualization	
INF	VM Ware	
INF	UX/UI design	
INF	Advanced Javascript	
INF	Advanced HTML/CSS	
INF	Advanced PHP	
INF	Advanced Web Developer (PHP)	
INF	Agile - Programming Language	
INF	Asp.Net - Programming Language	
INF	C-Programming Language	
INF	C# - Programming Language	
INF	Powershell II	
INF	Scrum- Programming Language	
INF	Visual Studio - Programming Language	
INF	Advanced Programming	
Total		65.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL \$11,195.00

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Cloud Computing/Cloud Application Development, TC

CRN	COURSE NAME	CREDITS
INF 113	Introduction to Programming	3
INF 118	Cloud Fundamentals	3
INF 121	Object-Oriented Programming (JavaScript)	3
INF 122	Introduction to Web Development	3
INF 126	Test Driven Development (JavaScript)	3
INF 131	Continuous Integration Continuous Deployment - CICD	3
INF 143	Web Application Development I (HTML/CSS)	3
INF 152	Web Application Development II (REACT)	3
INF 166	Cloud Application Development I (REACT on AWS)	3
PDV 105	Blueprint for Personal Success	2
INF	Information Technology Electives - 15 Credits	15
INF	Experiential Learning Electives - 3 Credits	3
Experiential Learning Electives		
INF 174	Information Technology Capstone	
INF 175	Information Technology Internship	
Information Technology Electives		
INF 105	A+ Certification - Essentials	
INF 110	A+ Certification - Application	
INF 112	Network Essentials	
INF 113	Introduction to Programming	
INF 115	Network+ Part I	
INF 116	Network+ Part II	
INF 118	Cloud Fundamentals	
INF 120	Security+	
INF 121	Object-Oriented Programming (JavaScript)	
INF 122	Introduction to Web Development	
INF 126	Test Driven Development (JavaScript)	
INF 127	Linux+ Part I	
INF 128	Linux+ Part II	
INF 131	Continuous Integration Continuous Delivery - CICD	
INF 134	Server	
INF 136	Powershell	
INF 138	Object -Oriented Programming (Python)	
INF 141	Test Driven Development (Python)	
INF 142	Introduction to Storage Solutions	
INF 143	Web Application Development I (HTML/CSS)	
INF 147	Website Production & Web Management	
INF 152	Web Application Development II (REACT)	
INF 153	Multi-Cloud Administration	
INF 155	Digital Forensics	
INF 157	Cyber Law and Ethics	
INF 158	Multi-Cloud Development Services	
INF 160	Server Security	
INF 161	Introduction to Networks	
INF 164	Switching, Routing, and Wireless Essentials	
INF 167	Enterprise Networking, Security, and Automation	
INF 165	Advanced Cyber Security	
INF 166	Cloud Application Development I (REACT on AWS)	
INF 168	AWS Cloud Practitioner	
INF 169	Machine Learning and AI Foundations with Predictive Analytics	
INF 170	Cloud Application Development II (Serverless REACT on AWS)	
INF 177	AWS Solutions Architect Associate	
INF 180	Advanced Network Security	
INF 182	Microsoft Azure Administrator	
INF 185	Virtual Private Cloud Administration	
INF 187	Cloud Native Infrastructure (Kubernetes)	
INF 188	Cloud Data and DevOps Specialist (AWS)	
INF 191	Microsoft Enterprise O365 Administration	
INF 193	Cloud DevOps Engineer I	
INF 196	Cloud DevOps Engineer II	
INF	Advanced HTML/CSS	
INF	Advanced Javascript	
INF	Advanced PHP	
INF	Advanced Programming	
INF	Agile - Programming Language	
INF	Asp.Net - Programming Language	
INF	C-Programming Language	
INF	C# - Programming Language	
INF	Powershell II	
INF	Scrum- Programming Language	
INF	Visual Studio - Programming Language	
INF	Virtualization	
INF	VM Ware	
INF	UX/UI design	
INF	Network Essentials	
Total		47.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center

301 S. Grove | Wichita, KS 67211

316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL

\$9,774.00

*Cost does not include online fees, books or tools.

Financial Assistance may be available to those who qualify.

Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

CNC Operator, TC

CRN	COURSE NAME	CREDITS
AVC 110	Safety/OSHA 10	1
MMG 113	Print Reading	3
MMG 116	Quality Control & Inspection	1
MMG 131	Metallurgy	1
MMG 155	CNC Lathe	3
MMG 156	CNC Operations	3
MMG 158	CNC Controllers	2
MMG 160	CNC Milling I	3
	Technical Electives - 4 Credits	4
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
	Technical Electives	
CAT 101	CATIA Part Design & Sketcher	
CAT 105	CATIA Assembly Design	
MCD 106	Precision Measuring	
MCD 201	Geometric Demensioning & Tolerancing	
MMG 170	CAM I	
MMG 175	CAM II	
MMG 180	CAM III	
MMG 225	Internship/Directed Work Study	
Total		26.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$6,420.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Commercial Pilot, COC

CRN	COURSE NAME	CREDITS
PLT 144	Introduction to Commercial Flight	2
PLT 152	Commercial Flight I	3
PLT 164	Commercial Flight II	3
Total		8.00

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$2,688.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

Composite Fabrication, COC

CRN	COURSE NAME	CREDITS
CFT 101	Introduction to Composites	2
CFT 106	Composite Finish Trim	2
CFT 107	Composite Assembly	2
CFT 130	Composite Fabrication Methods /Applications	2
AVC 110	Safety/OSHA 10	1
AVC 112	Blueprint Reading	2
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
Total		16.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$4,450.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Composite Fabrication, TC

CRN	COURSE NAME	CREDITS
CFT 101	Introduction to Composites	2
CFT 106	Composite Finish Trim	2
CFT 107	Composite Assembly	2
CFT 130	Composite Fabrication Methods /Applications	2
AVC 102	Precision Instruments	1
AVC 104	Quality Control Concepts	1
AVC 105	Aircraft Familiarization	1
AVC 110	Safety/OSHA 10	1
AVC 112	Blueprint Reading	2
AVC 120	Introduction to Sealing	1
AVC 140	Electrical Bonding & Grounding	1
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
Total		21.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$5,450.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Composite Repair, COC

CRN	COURSE NAME	CREDITS
CFT 140	Composite Inspection	2
CFT 141	Disassemble & Damage Removal Techniques	3
CFT 142	Composite Repair	4
CFT 143	Complex Composite Repairs	3
CFT 144	Electrical Bonding Repair	1
AVC 102	Precision Instruments	1
AVC 110	Safety/OSHA 10	1
Total		15.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$5,389.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Composite Repair, TC

CRN	COURSE NAME	CREDITS
CFT 101	Introduction to Composites	2
CFT 106	Composite Finish Trim	2
CFT 107	Composite Assembly	2
CFT 130	Composite Fabrication Methods /Applications	2
CFT 140	Composite Inspection	2
CFT 141	Disassemble & Damage Removal Techniques	3
CFT 142	Composite Repair	4
CFT 143	Complex Composite Repairs	3
CFT 144	Electrical Bonding Repair	1
AVC 102	Precision Instruments	1
AVC 104	Quality Control Concepts	1
AVC 105	Aircraft Familiarization	1
AVC 107	Fundamentals for Aerospace Manufacturing	1
AVC 108	Aircraft Systems & Components	4
AVC 110	Safety/OSHA 10	1
AVC 112	Blueprint Reading	2
AVC 120	Introduction to Sealing	1
AVC 125	Bonding and Grounding	1
AVC 135	Hand Tools	1
AVC 140	Electrical Bonding & Grounding	1
AVC 145	Power Island	1
CED 101	Computer Essentials	2
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
SPH 111	Interpersonal Communication	3
Total		47.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$12,635.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Composite Technology, AAS

CRN	COURSE NAME	CREDITS
CFT 101	Introduction to Composites	2
CFT 106	Composite Finish Trim	2
CFT 107	Composite Assembly	2
CFT 130	Composite Fabrication Methods /Applications	2
CFT 140	Composite Inspection	2
CFT 141	Disassemble & Damage Removal Techniques	3
CFT 142	Composite Repair	4
CFT 143	Complex Composite Repairs	3
CFT 144	Electrical Bonding Repair	1
AVC 102	Precision Instruments	1
AVC 104	Quality Control Concepts	1
AVC 105	Aircraft Familiarization	1
AVC 107	Fundamentals for Aerospace Manufacturing	1
AVC 108	Aircraft Systems & Components	4
AVC 110	Safety/OSHA 10	1
AVC 112	Blueprint Reading	2
AVC 120	Introduction to Sealing	1
AVC 125	Bonding and Grounding	1
AVC 135	Hand Tools	1
AVC 140	Electrical Bonding & Grounding	1
AVC 145	Power Island	1
LEN 100	Lean for Operations	3
CED 115	Computer Applications	3
CHM 110	General Chemistry	5
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
SPH 111	Interpersonal Communication	3
	Math Elective	3
	Social Science Elective	3
Total		62.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$14,685.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Computer Support Specialist, AAS

CRN	COURSE NAME	CREDITS
INF 105	A+ Certification - Essentials	3
INF 110	A+ Certification - Application	3
INF 112	Network Essentials	3
INF 115	Network+ Part I	3
INF 116	Network+ Part II	3
INF 120	Security+	3
INF 134	Server	3
INF 136	Introduction to PowerShell	3
INF	Computer Support Specialist Electives - 12 Credits	12
INF	Information Systems Electives - 6 Credits	6
INF	Experiential Learning Electives - 3 Credits	3
CED 115	Computer Applications	3
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
	Communication Elective	2
	Math Elective	3
	Social Science Elective	3
Computer Support Specialist Electives		
INF 122	Introduction to Web Development	3
INF 127	Linux+ Part I	3
INF 128	Linux+ Part II	3
INF 142	Introduction to Storage Solutions	3
INF 161	Introduction to Networks	3
INF 164	Switching, Routing, and Wireless Essentials	3
INF 167	Enterprise Networking, Security, and Automation	3
Experiential Learning		
INF 174	Information Technology Capstone	3
INF 175	Information Technology Internship	3
Information Systems Electives		
INF 105	A+ Certification - Essentials	3
INF 110	A+ Certification - Application	3
INF 112	Network Essentials	3
INF 113	Introduction to Programming	3
INF 115	Network+ Part I	3
INF 116	Network+ Part II	3
INF 118	Cloud Fundamentals	3
INF 120	Security+	3
INF 121	Object-Oriented Programming (JavaScript)	3
INF 122	Introduction to Web Development -	3
INF 126	Test Driven Development (JavaScript)	3
INF 127	Linux+ Part I	3
INF 128	Linux+ Part II	3
INF 131	Continuous Integration Continuous Deployment - CICD	3
INF 134	Server	3
INF 136	Introduction to PowerShell	3
INF 138	Object-Oriented Programming (Python)	3
INF 141	Test Driven Development (Python)	3
INF 142	Introduction to Storage Solutions	3
INF 143	Web Application Development I (HTML/CSS)	3
INF 147	Website Production & Management	3
INF 152	Web Application Development II (REACT)	3
INF 153	Multi-Cloud Administration	3
INF 155	Digital Forensics	3
INF 156	Advanced Web Development (PHP)	3
INF 157	Cyber Law and Ethics	3
INF 158	Multi-Cloud Development Services	3
INF 160	Server Security	3
INF 161	Introduction to Networks	3
INF 164	Switching, Routing, and Wireless Essentials	3
INF 165	Advanced Cyber Security	3
INF 166	Cloud Application Development I (REACT on AWS)	3
INF 167	Enterprise Networking, Security, and Automation	3
INF 168	AWS Cloud Practitioner	3
INF 169	Machine Learning and AI Foundations with Predictive	3
Analytics		
INF 170	Cloud Application Development II (Serverless REACT on AWS)	3
INF 177	AWS Solutions Architect Associate	3
INF 180	Advanced Network Security	3
INF 182	Microsoft Azure Administrator	3
INF 185	Virtual Private Cloud Administration	3
INF 187	Cloud Native Infrastructure (Kubernetes)	3
INF 188	Cloud Data and DevOps Specialist (AWS)	3
INF 191	Microsoft Enterprise O365 Administration	3
INF 193	Cloud DevOps Engineer I	3
INF 196	Cloud DevOps Engineer II	3
Total		62.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center

301 S. Grove | Wichita, KS 67211

316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL

\$13,602.00

*Cost does not include online fees, books or tools.

Financial Assistance may be available to those who qualify.

Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Computer Support Specialist, TC

CRN COURSE NAME CREDITS

INF	105	A+ Certification - Essentials	
INF	110	A+ Certification - Application	
INF	112	Network Essentials	
INF	115	Network+ Part I	
INF	116	Network+ Part II	
INF	120	Security+	
INF	134	Server	
INF	136	Introduction to PowerShell	
Computer Support Specialist Electives - 12 Credits			
Experiential Learning Electives - 3 Credits			
OPM	115	Introduction to Project Management	
PDV	105	Blueprint for Personal Success	
Computer Support Specialist Electives			
INF	122	Introduction to Web Development -	
INF	127	Linux+ Part I	
INF	128	Linux+ Part II	
INF	142	Introduction to Storage Solutions	
INF	161	Introduction to Networks	
INF	164	Switching, Routing, and Wireless Essentials	
INF	167	Enterprise Networking, Security, and Automation	
Experiential Learning Electives			
INF	174	Information Technology Capstone	
INF	175	Information Technology Internship	
Total			44.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL \$10,770.00

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Construction Science AAS

CRN	COURSE NAME	CREDITS
CCP 100	Introductory Craft Skills	3
CCP 105	Carpentry Basics	4
CCP 110	Floors, Walls, & Ceiling Framing	4
CCP 115	Roof Framing	3
CCP 120	Windows, Doors, & Stairs	3
CCP 125	Commercial Drawings	2
CCP 130	Roofing Applications	1
CCP 135	Thermal and Moisture Protection	1
CCP 140	Exterior Finishing	2
CCP 145	Cold-Formed Steel Framing	1
CCP 147	Carpentry Blue Print Reading	2
CCP 150	Drywall Installation and Finishing	2
CCP 153	Carpentry Technical Drafting	1
CCP 155	Doors and Door Hardware	1
CCP 170	Suspended Ceilings	1
CCP 175	Window, Door, Floor, and Ceiling Trim	1
CCP 180	Cabinet Installation	1
CCP 185	Carpentry Internship I	3
CCP 187	Carpentry Internship II	3
MCD 101	Introduction to CAD I	3
MCD 102	Introduction to CAD II	2
SAF 101	Safety Orientation/OSHA 10	1
CED 115	Computer Applications	3
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
	Communication Elective	3
	Math Elective	3
	Social Science Elective	3
Total		62.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$12,864.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Construction Science, TC

CRN	COURSE NAME	CREDITS
CCP 100	Introductory Craft Skills	3
CCP 105	Carpentry Basics	4
CCP 110	Floors, Walls, & Ceiling Framing	4
CCP 115	Roof Framing	3
CCP 120	Windows, Doors, & Stairs	3
CCP 125	Commercial Drawings	2
CCP 130	Roofing Applications	1
CCP 135	Thermal and Moisture Protection	1
CCP 140	Exterior Finishing	2
CCP 145	Cold-Formed Steel Framing	1
CCP 150	Drywall Installation and Finishing	2
CCP 155	Doors and Door Hardware	1
CCP 170	Suspended Ceilings	1
CCP 175	Window, Door, Floor, and Ceiling Trim	1
CCP 180	Cabinet Installation	1
CCP 185	Carpentry Internship I	3
SAF 101	Safety Orientation/OSHA 10	1
PDV 105	Blueprint for Personal Success	2
Total		36.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$8,626.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Culinary Arts, AAS

CRN	COURSE NAME	CREDITS
HEM 105	Sanitation and Safety	2
HEM 115	Introduction to the Hospitality Industry	2
CUL 105	Culinary Fundamentals	3
CUL 110	Introduction to Gastronomy & Sustainability	3
CUL 115	Culinary Nutrition	3
CUL 120	Modern Banquet Cookery	3
CUL 130	Culinary Innovation & Sustainability	3
CUL 135	Cuisines and Cultures of the United States	3
CUL 140	Global Cuisines and Cultures	3
CUL 145	Cuisines and Cultures of the Mediterranean	3
CUL 150	Cuisines and Cultures of Northern Europe	3
CUL 155	Cuisines and Cultures of Asia	3
CUL 125	Baking & Pastry Skill Development	3
CUL 160	Garde Manger	3
CUL 165	Culinary Arts Internship	3
CUL	Select 3 Credit Hours from Culinary Arts Electives	3
CED 115	Computer Applications	3
ENG 101	Composition I	3
MTH 101	Intermediate Algebra	3
PDV 105	Blueprint for Personal Success	2
SPH 111	Interpersonal Communication	3
	Social Science Elective	3
	Culinary Arts Electives	
CUL 170	Advanced Baking: Chocolate and Confectionary Techniques	
CUL 175	Advanced Baking: Cakes and Desserts	
CUL 180	Advanced Baking: Breads and Rolls	
Total		63.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$11,858.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Culinary Arts, TC

CRN	COURSE NAME	CREDITS
HEM 105	Sanitation and Safety	2
HEM 115	Introduction to the Hospitality Industry	2
CUL 105	Culinary Fundamentals	3
CUL 110	Introduction to Gastronomy & Sustainability	3
CUL 120	Modern Banquet Cookery	3
CUL 115	Culinary Nutrition	3
CUL 165	Culinary Arts Internship	3
CUL 125	Baking & Pastry Skill Development	3
PDV 105	Blueprint for Personal Success	2
SPH 111	Interpersonal Communication	3
MTH 101	Intermediate Algebra	3
Total		30.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$5,440.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Dental Assistant, AAS

CRN	COURSE NAME	CREDITS
DAS 113	Dental Materials I	4
DAS 114	Dental Radiology I	3
DAS 119	Dental Anatomy	2
DAS 120	Dental Science	2
DAS 122	Chairside Assisting I	4
DAS 140	Chairside Assisting II	2
DAS 147	Dental Practice Management	3
DAS 148	Dental Materials II	2
DAS 149	Infection Control for Dental Practice	2
DAS 150	Clinical Experience	7
ALH 101	Medical Terminology	3
ALH 110	Principles of Nutrition	3
ALH 130	Emergency Preparedness for Health Professionals	1
ALH 131	Diseases, Disorders & Diagnostic Procedures	2
BIO 150	Human Anatomy & Physiology	5
CPR 001	CPR for Healthcare Providers	1
CED 115	Computer Applications	3
ENG 101	Composition I	3
PSY 101	General Psychology	3
	Communication Elective	3
	Math Elective	3
Total		61.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU Advanced Education in General Dentistry (AEGD)
2838 N. Oliver | Wichita, KS 67220
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$12,088.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Dental Assistant, TC

CRN	COURSE NAME	CREDITS
DAS 113	Dental Materials I	4
DAS 114	Dental Radiology I	3
DAS 119	Dental Anatomy	2
DAS 120	Dental Science	2
DAS 122	Chairside Assisting I	4
DAS 140	Chairside Assisting II	2
DAS 147	Dental Practice Management	3
DAS 148	Dental Materials II	2
DAS 149	Infection Control for Dental Practice	2
DAS 150	Clinical Experience	7
BIO 150	Human Anatomy & Physiology	5
CPR 001	CPR for Healthcare Providers	1
Total		37.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU Advanced Education in General Dentistry (AEGD)
2838 N. Oliver | Wichita, KS 67220
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$8,656.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Digital Marketing, AAS

CRN	COURSE NAME	CREDITS
DMK 110	Introduction to Media Arts	3
DMK 120	Basic Digital Editing	3
DMK 130	Digital Marketing Strategy	3
DMK 135	Social Media Marketing and Management	3
DMK 140	Introduction to Audio/Visual Production	3
DMK 150	Search Engine Optimization & Marketing	3
DMK 160	Introduction to Analytics	3
DMK 165	Digital Marketing Portfolio	3
DMK	Experiential Learning Electives- 4 Credits	4
BUS 135	Introduction to Public Relations	3
BUS 140	Principles of Marketing	3
INF 122	Introduction to Web Development	3
INF 147	Website Production & Management	3
OPM 115	Introduction to Project Management	3
ENG 101	Composition I	3
ENG 120	Composition II	3
PDV 105	Blueprint for Personal Success	2
SPH 101	Public Speaking	3
	Humanities Elective	3
	Math Elective	3
Experiential Learning Electives		
DMK 170	Digital Marketing Capstone	
DMK 175	Digital Marketing Internship	
Total		60.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$9,132.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Digital Marketing, TC

CRN	COURSE NAME	CREDITS
DMK 110	Introduction to Media Arts	3
DMK 120	Basic Digital Editing	3
DMK 130	Digital Marketing Strategy	3
DMK 135	Social Media Marketing and Management	3
DMK 140	Introduction to Audio/Visual Production	3
DMK 150	Search Engine Optimization & Marketing	3
DMK 160	Introduction to Analytics	3
DMK 165	Digital Marketing Portfolio	3
INF 122	Introduction to Web Development	3
INF 147	Website Production & Management	3
BUS 140	Principles of Marketing	3
ENG 101	Composition I	3
ENG 120	Composition II	3
PDV 105	Blueprint for Personal Success	2
Total		41.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$6,354.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Eddy Current Technician, COC

CRN	COURSE NAME	CREDITS
NDT 110	Eddy Current Level I	3
NDT 111	Eddy Current Level II	3
Total		6.00

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$1,614.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

Electrical Assembly, TC

CRN	COURSE NAME	CREDITS
AER 165	Electrical Assembly Mechanic Orientation	1
AER 166	Electrical Hand Tools	1
AER 167	Basic Drilling & Riveting/Ground Stud Installation	2
AER 168	Wire Installation Drawings	1
AER 169	Crimping & Cables	2
AER 170	Fiber Optics for Aerospace	1
AER 175	Wire Bundle Basics	1
AER 180	Soldering	1
AER 185	Wire Bundle Installation	2
AVC 102	Precision Instruments	1
AVC 104	Quality Control Concepts	1
AVC 105	Aircraft Familiarization	1
AVC 107	Fundamentals for Aerospace Manufacturing	1
AVC 108	Aircraft Systems & Components	4
AVC 110	Safety/OSHA 10	1
AVC 112	Blueprint Reading	2
AVC 120	Introduction to Sealing	1
AVC 125	Bonding and Grounding	1
AVC 135	Hand Tools	1
AVC 140	Electrical Bonding & Grounding	1
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
Total		32.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$7,081.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Electronics Technology, AAS

CRN	COURSE NAME	CREDITS
-----	-------------	---------

ELT	101	Fundamentals of Electronics Technology	3
ELT	103	Introduction to Programming	3
ELT	105	DC Electronics	2
ELT	106	DC Electronics Lab	2
ELT	108	Fundamentals of Small UAS Operations	3
ELT	110	AC Electronics	2
ELT	111	AC Electronics Lab	2
ELT	115	Digital Electronics Fundamentals	2
ELT	116	Digital Electronics Fundamentals Lab	2
ELT	120	Solid State Electronics	2
ELT	121	Solid State Electronics Lab	2
ELT	125	Introduction to Avionics	2
ELT	127	Wiring & Cannon Plug Lab	2

CRN	COURSE NAME	CREDITS
-----	-------------	---------

ELT		Electives 16 Credits	16
CED	115	Computer Applications	3
ENG	101	Composition I	3
MTH	112	College Algebra	3
PDV	105	Blueprint for Personal Success	2
PHS	120	General Physics I	5

Communication Elective

Avionics Electives

ELT	130	Avionics Systems and Troubleshooting	
ELT	131	Avionics Systems and Troubleshooting Lab	
ELT	135	Communications, Navigation and Surveillance I	
ELT	136	Communications, Navigation, and Surveillance I Lab	
ELT	137	Communications, Navigation, and Surveillance II	
ELT	138	Communications, Navigation, and Surveillance II Lab	

Instrumentation Electives

ELT	145	Integrated Circuits and Systems	
ELT	146	Integrated Circuits and Systems Lab	
ELT	160	Microprocessor and Microcontroller Systems	
ELT	161	Microprocessor and Microcontroller Systems Lab	
ELT	165	Electronic Measurement and Instrumentation	
ELT	166	Electronic Measurement and Instrumentation Lab	
ELT	170	Practical Electronics Technology for ETA Applications	

Communications Electives

ELT	145	Integrated Circuits and Systems	
ELT	146	Integrated Circuits and Systems Lab	
ELT	150	Antennas and Wave Propagation	
ELT	151	Antennas and Wave Propagation Lab	
ELT	155	Electronics Communication Circuits and Systems	
ELT	156	Electronics Communication Circuits and Systems Lab	
ELT	170	Practical Electronics Technology for ETA Applications	

Total **64.00**

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$11,582.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Electronics Technology Avionics, TC

CRN	COURSE NAME	CREDITS
ELT 101	Fundamentals of Electronics Technology	3
ELT 103	Introduction to Programming	3
ELT 105	DC Electronics	2
ELT 106	DC Electronics Lab	2
ELT 108	Fundamentals of Small UAS Operations	3
ELT 110	AC Electronics	2
ELT 111	AC Electronics Lab	2
ELT 115	Digital Electronics Fundamentals	2
ELT 116	Digital Electronics Fundamentals Lab	2
ELT 120	Solid State Electronics	2
ELT 121	Solid State Electronics Lab	2
ELT 125	Introduction to Avionics	2
ELT 127	Wiring & Cannon Plug Lab	2
ELT 130	Avionics Systems & Troubleshooting	2
ELT 131	Avionics Systems & Troubleshooting Lab	2
ELT 135	Communications, Navigation, and Surveillance Systems I	2
ELT 136	Communications, Navigation, and Surveillance Systems I Lab	3
ELT 137	Communications, Navigation, and Surveillance Systems II	2
ELT 138	Communications, Navigation, and Surveillance Systems II Lab	3
PDV 105	Blueprint for Personal Success	2
	Math Elective	3
Total		48.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$9,982.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Electronics Technology Communications, TC

CRN	COURSE NAME	CREDITS
ELT 101	Fundamentals of Electronics Technology	3
ELT 103	Introduction to Programming	3
ELT 105	DC Electronics	2
ELT 106	DC Electronics Lab	2
ELT 108	Fundamentals of Small UAS Operations	3
ELT 110	AC Electronics	2
ELT 111	AC Electronics Lab	2
ELT 115	Digital Electronics Fundamentals	2
ELT 116	Digital Electronics Fundamentals Lab	2
ELT 120	Solid State Electronics	2
ELT 121	Solid State Electronics Lab	2
ELT 125	Introduction to Avionics	2
ELT 127	Wiring & Cannon Plug Lab	2
ELT 145	Integrated Circuits and Systems	2
ELT 146	Integrated Circuits and Systems Lab	2
ELT 150	Antennas and Wave Propagation	2
ELT 151	Antennas and Wave Propagation Lab	3
ELT 155	Electronic Communication Circuits and Systems	2
ELT 156	Electronic Communication Circuits and Systems Lab	3
PDV 105	Blueprint for Personal Success	2
	Math Elective	3
Total		48.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$10,062.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Electronics Technology Instrumentation, TC

CRN	COURSE NAME	CREDITS
ELT 101	Fundamentals of Electronics Technology	3
ELT 103	Introduction to Programming	3
ELT 105	DC Electronics	2
ELT 106	DC Electronics Lab	2
ELT 108	Fundamentals of Small UAS Operations	3
ELT 110	AC Electronics	2
ELT 111	AC Electronics Lab	2
ELT 115	Digital Electronics Fundamentals	2
ELT 116	Digital Electronics Fundamentals Lab	2
ELT 120	Solid State Electronics	2
ELT 121	Solid State Electronics Lab	2
ELT 125	Introduction to Avionics	2
ELT 127	Wiring & Cannon Plug Lab	2
ELT 145	Integrated Circuits and Systems	2
ELT 146	Integrated Circuits and Systems Lab	2
ELT 160	Microprocessor and Microcontroller Systems	2
ELT 161	Microprocessor and Microcontroller Systems Lab	3
ELT 165	Electronic Measurement and Instrumentation	2
ELT 166	Electronic Measurement and Instrumentation Lab	3
PDV 105	Blueprint for Personal Success	2
	Math Elective	3
Total		48.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$10,062.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Emergency Medical Services - High School, COC

CRN	COURSE NAME	CREDITS
EMS 103	EMT 1	6
EMS 104	EMT 2	6
Total		12.00

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$1,692.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

Emergency Medical Services, TC

CRN	COURSE NAME	CREDITS
EMS 115	Tactical Medicine	3
EMS	Technical Elective - 12 Credits	12
CPR 001	CPR for Healthcare Providers	1
PDV 105	Blueprint for Personal Success	2
Total		18.00

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$2,999.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

Emergency Medical Technician, COC

CRN	COURSE NAME	CREDITS
EMS	Technical Electives - 12 Credits	12
CPR 001	CPR for Healthcare Providers	1
Technical Electives		
EMS 103	EMT 1	
EMS 104	EMT 2	
EMS 105	Emergency Medical Technician	
Total		13.00

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$2,184.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

Engineering Design, COC

CRN	COURSE NAME	CREDITS
CAT 101	CATIA Part Design & Sketcher	4
CAT 102	CATIA Drafting	4
CAT 105	CATIA Assembly Design	4
Total		12.00

LOCATION

National Center for Aviation Training
4004 North Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$3,775.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

Engineering Design Technology, AAS

CRN	COURSE NAME	CREDITS
-----	-------------	---------

CAT	101	CATIA Part Design & Sketcher	4
CAT	102	CATIA Drafting	4
CAT	103	CATIA 3D Tolerancing & Annotations	4
CAT	105	CATIA Assembly Design	4
CAT	110	CATIA Wireframe & Surfaces	4
MCD	101	Introduction to CAD I	3
MCD	102	Introduction to CAD II	2
MCD	104	Blueprint Reading for Drafting	2
MCD	106	Precision Measuring	2
MCD	115	Machine Drafting & Design	3
MCD	121	Descriptive Geometry	3
MCD	124	Advanced AutoCAD	4
MCD	137	Introduction to 3D Printing	2
MCD		Technical Electives - 3 Credits	3
CED	115	Computer Applications	3
ENG	101	Composition I	3
PDV	105	Blueprint for Personal Success	2
		Communication Elective	3
		Math Elective	3
		Science Elective	5
		Social Science Elective	3
Technical Electives			
CAT	115	CATIA Prismatic Machining	
CAT	124	CATIA Surface Machining	
MCD	130	Basic Solidworks	
MCD	133	Advanced Solidworks	
MCD	140	Drafting Technology Internship	
MCD	201	Geometric Dimensioning & Tolerance	
MCD	210	Advanced Measuring	
Total			66.00

LOCATION

National Center for Aviation Training
4004 North Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$15,116.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

Engineering Design Technology, TC

CRN	COURSE NAME	CREDITS
CAT 101	CATIA Part Design & Sketcher	4
CAT 102	CATIA Drafting	4
CAT 103	CATIA 3D Tolerancing & Annotations	4
CAT 105	CATIA Assembly Design	4
CAT 110	CATIA Wireframe & Surfaces	4
MCD 101	Introduction to CAD I	3
MCD 102	Introduction to CAD II	2
MCD 104	Blueprint Reading for Drafting	2
MCD 106	Precision Measuring	2
MCD 115	Machine Drafting & Design	3
MCD 121	Descriptive Geometry	3
MCD 124	Advanced AutoCAD	4
MCD 137	Introduction to 3D Printing	2
PDV 105	Blueprint for Personal Success	2
	Communication Elective	3
	Math Elective	3
Total		49.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 North Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$12,253.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Events Management, AAS

CRN	COURSE NAME	CREDITS
HEM 105	Sanitation and Safety	2
HEM 115	Introduction to the Hospitality Industry	2
HEM 120	Hospitality Service Techniques	3
HEM 125	Food & Beverage Management Fundamentals	3
HEM 130	Introduction to Lodging Operations	2
HEM 135	Hospitality Human Resource Management	3
HEM 140	Hospitality Financial Management	3
HEM 145	Fundamentals of Excellent Customer Service	3
HEM 175	Event Catering Strategies	3
HEM 180	Event Industry Fundamentals	3
HEM 185	Event and Meeting Contracting	3
HEM 190	Event Support Systems	3
HEM 195	Special Events and Meetings	3
HEM 200	Event Project Planning	3
HEM 235	Hospitality Management Internship	4
HEM	Hospitality and Events Electives - 5 Credits	5
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
	Communication Elective	3
	Humanities Elective	3
	Math Elective	3
	Social Science Elective	3
Hospitality and Events Electives		
HEM 150	Food and Beverage Operations	
HEM 155	Front Office Management	
HEM 160	Housekeeping and Environmental Services	
HEM 165	Revenue Management	
HEM 170	Sales	
HEM 175	Event Catering Strategies	
HEM 180	Event Industry Fundamentals	
HEM 185	Event and Meeting Contracting	
HEM 190	Event Support Systems	
HEM 195	Special Events and Meetings	
HEM 200	Event Project Planning	
HEM 205	Alcohol Beverage Law	
HEM 210	Beer and Spirits	
HEM 215	Food and Alcohol	
HEM 220	Beverage Promotion	
HEM 225	Wine Fundamentals	
HEM 230	Mixology	
Total		65.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$10,215.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Events Management, TC

CRN	COURSE NAME	CREDITS
HEM 105	Sanitation and Safety	2
HEM 110	Hospitality Math	3
HEM 115	Introduction to the Hospitality Industry	2
HEM 120	Hospitality Service Techniques	3
HEM 125	Food & Beverage Management Fundamentals	3
HEM 130	Introduction to Lodging Operations	2
HEM 135	Hospitality Human Resource Management	3
HEM 140	Hospitality Financial Management	3
HEM 145	Fundamentals of Excellent Customer Service	3
HEM 175	Event Catering Strategies	3
HEM 180	Event Industry Fundamentals	3
HEM 185	Event and Meeting Contracting	3
HEM 190	Event Support Systems	3
HEM 195	Special Events and Meetings	3
HEM 200	Event Project Planning	3
HEM 235	Hospitality Management Internship	4
PDV 105	Blueprint for Personal Success	2
Total		48.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$7,868.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Food and Beverage Management, AAS

CRN	COURSE NAME	CREDITS
HEM 105	Sanitation and Safety	2
HEM 115	Introduction to the Hospitality Industry	2
HEM 120	Hospitality Service Techniques	3
HEM 125	Food & Beverage Management Fundamentals	3
HEM 130	Introduction to Lodging Operations	2
HEM 135	Hospitality Human Resource Management	3
HEM 140	Hospitality Financial Management	3
HEM 145	Fundamentals of Excellent Customer Service	3
HEM 175	Event Catering Strategies	3
HEM 205	Alcohol Beverage Law	3
HEM 210	Beer and Spirits	3
HEM 215	Food and Alcohol	3
HEM 220	Beverage Promotion	1
HEM 225	Wine Fundamentals	3
HEM 230	Mixology	4
HEM 235	Hospitality Management Internship	4
HEM	Hospitality and Events Electives 3 Credits	3
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
	Communication Elective	3
	Humanities Elective	3
	Math Elective	3
	Social Science Elective	3
Hospitality and Events Electives		
HEM 150	Food and Beverage Operations	
HEM 155	Front Office Management	
HEM 160	Housekeeping and Environmental Services	
HEM 165	Revenue Management	
HEM 170	Sales	
HEM 175	Event Catering Strategies	
HEM 180	Event Industry Fundamentals	
HEM 185	Event and Meeting Contracting	
HEM 190	Event Support Systems	
HEM 195	Special Events and Meetings	
HEM 200	Event Project Planning	
HEM 205	Alcohol Beverage Law	
HEM 210	Beer and Spirits	
HEM 215	Food and Alcohol	
HEM 220	Beverage Promotion	
HEM 225	Wine Fundamentals	
HEM 230	Mixology	
Total		65.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$10,491.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Food and Beverage Management, TC

CRN	COURSE NAME	CREDITS
HEM 105	Sanitation and Safety	2
HEM 110	Hospitality Math	3
HEM 115	Introduction to the Hospitality Industry	2
HEM 120	Hospitality Service Techniques	3
HEM 125	Food & Beverage Management Fundamentals	3
HEM 130	Introduction to Lodging Operations	2
HEM 135	Hospitality Human Resource Management	3
HEM 140	Hospitality Financial Management	3
HEM 145	Fundamentals of Excellent Customer Service	3
HEM 175	Event Catering Strategies	3
HEM 205	Alcohol Beverage Law	3
HEM 210	Beer and Spirits	3
HEM 215	Food and Alcohol	3
HEM 220	Beverage Promotion	1
HEM 225	Wine Fundamentals	3
HEM 230	Mixology	4
HEM 235	Hospitality Management Internship	4
PDV 105	Blueprint for Personal Success	2
Total		50.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$8,480.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Fundamentals of Aerospace Manufacturing, TC

CRN	COURSE NAME	CREDITS
AER 150	Assembly Overview I	3
AER 168	Wire Installation Drawings	1
AER 175	Wire Bundle Basics	1
AVC 105	Aircraft Familiarization	1
AVC 107	Fundamentals for Aerospace Manufacturing	1
AVC 108	Aircraft Systems & Components	4
AVC 110	Safety/OSHA 10	1
AVC 112	Blueprint Reading	2
AVC 125	Bonding and Grounding	1
AVC 135	Hand Tools	1
AVC 140	Electrical Bonding & Grounding	1
AVC 145	Power Island	1
CFT 135	Overview of Composite Inspection	1
Total		19.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$4,395.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Healthcare Admin & Management, AAS

CRN	COURSE NAME	CREDITS
-----	-------------	---------

PNR 119	KSPN Fundamentals of Pharmacology and Safe Medication Administration	2
PNR 120	KSPN Foundations of Nursing	4
PNR 121	KSPN Foundations of Nursing Clinical	2
PNR 128	KSPN Nursing Care of Adults I	5
PNR 129	KSPN Nursing Care of Adults I Clinical	3
PNR 130	KSPN Maternal Child Nursing	2
PNR 131	KSPN Maternal Child Nursing Clinical	1
PNR 135	KSPN Mental Health Nursing	2
PNR 136	Transition to Nursing	2
PNR 138	KSPN Nursing Care of Adults II	5
PNR 139	KSPN Nursing Care of Adults II Clinical	2
PNR 141	KSPN Care of Aging Adults	2
PNR 166	KSPN Leadership, Roles, and Issues	2
PNR 170	Healthcare Practice Management	3
PNR 180	Healthcare Issues	3
	Technical Elective 4 Credits	4
ALH 110	Principles of Nutrition	3
BIO 150	Human Anatomy & Physiology	5
ENG 101	Composition I	3
PSY 101	General Psychology	3
PSY 120	Developmental Psychology	3
	Communication Elective	3
	Math Elective	3
	Technical Electives	
BIO 160	Microbiology	
GRA 101	Certified Nurse Aide	
PNR 175	Healthcare Management Research	
Total		67.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

Old Town
213 N. Mead | Wichita, KS 67202
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$14,163.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Home Health Aide, COC

CRN	COURSE NAME	CREDITS
HHA 100	Home Health Aide	2.00
Total		2.00

LOCATION

Old Town
213 N. Mead | Wichita, KS 67202
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$340.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

Industrial Automation and Machine Maintenance, AAS

CRN COURSE NAME CREDITS

IND	105	Industrial Automation Test Equipment	3
IND	106	Direct & Alternating Current	4
IND	109	Basic Industrial Programmable Logic Controls	4
IND	111	Foundations of Manufacturing	3
IND	117	Variable Speed Motor Control	3
IND	116	Advanced Motor Controls	3
IND	121	Mechanical Systems Reliability	3
IND	123	Industrial Fluid Power	4
IND	130	Mechanical Systems	3
IND	131	Industrial Programmable Logic Controls (PLC)	3
IND	132	Industrial Process Control	3
		Technical Electives -6 Credits	6
AVC	110	Safety/OSHA 10	1
CED	115	Computer Applications	3
ENG	101	Composition I	3
PDV	105	Blueprint for Personal Success	2
		Communication Elective	3
		Humanities Elective	3
		Math Elective	3
		Technical Electives	
IND	139	CNC Operations for Maintenance Applications	
IND	145	Advanced Technologies in Predictive Maintenance	
ROB	100	Introduction to Robotics	
		Total	60.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$12,891.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Industrial Automation and Machine Maintenance, TC

CRN	COURSE NAME	CREDITS
IND 105	Industrial Automation Test Equipment	3
IND 106	Direct & Alternating Current	4
IND 109	Basic Industrial Programmable Logic Controls	4
IND 111	Foundations of Manufacturing	3
IND 116	Advanced Motor Controls	3
IND 117	Variable Speed Motor Control	3
IND 121	Mechanical Systems Reliability	3
IND 123	Industrial Fluid Power	4
IND 130	Mechanical Systems	3
IND 131	Industrial Programmable Logic Controls (PLC)	3
IND 132	Industrial Process Control	3
	Technical Electives - 6 Credits	6
AVC 110	Safety/OSHA 10	1
PDV 105	Blueprint for Personal Success	2
	Math Elective	3
	Technical Electives	
IND 139	CNC Operation for Maintenance Applications	
IND 145	Advanced Technologies in Predictive Maintenance	
ROB 100	Introduction to Robotics	
Total		48.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$11,199.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Information Technology Systems/Computer Support Specialist Emphasis in Cyber Security, AAS

CRN	COURSE NAME	CREDITS
INF 105	A+ Certification - Essentials	3
INF 110	A+ Certification - Application	3
INF 112	Network Essentials	3
INF 115	Network+ Part I	3
INF 116	Network+ Part II	3
INF 120	Security+	3
INF 134	Server	3
INF 136	Introduction to PowerShell	3
INF	Cyber Security Electives - 12 Credits	12
INF	Information Systems Electives - 6 Credits	6
INF	Experiential Learning Electives - 3 Credits	3
CED 115	Computer Applications	3
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
	Communication Elective	3
	Math Elective	3
	Social Science Elective	3
	Cyber Security Electives	
INF 155	Digital Forensics	3
INF 157	Cyber Law and Ethics	3
INF 160	Server Security	3
INF 165	Advanced Cyber Security	3
	Experiential Learning Electives	
INF 174	Information Technology Capstone	3
INF 175	Information Technology Internship	3
	Information Systems Electives	
INF 105	A+ Certification	3
INF 110	A+ Certification - Application	3
INF 112	Network Essentials	3
INF 113	Introduction to Programming	3
INF 115	Network+ Part I	3
INF 116	Network+ Part II	3
INF 118	Cloud Computing	3
INF 120	Security+	3
INF 121	Object-Oriented Programming (JavaScript)	3
INF 122	Introduction to Web Development	3
INF 126	Test Driven Development (JavaScript)	3
INF 127	Linux+ Part I	3
INF 128	Linux+ Part II	3
INF 131	Continuous Integration Continuous Delivery - CICD	3
INF 134	Server	3
INF 136	Powershell	3
INF 138	Object -Oriented Programming (Python)	3
INF 141	Test Driven Development (Python)	3
INF 142	Introduction to Storage Solutions	3
INF 143	Web Application Development I (HTML/CSS)	3
INF 147	Website Production & Web Management	3
INF 152	Web Application Development II (REACT)	3
INF 153	Multi-Cloud Administration	3
INF 155	Digital Forensics	3
INF 156	Advanced Web Development (PHP)	3
INF 157	Cyber Law and Ethics	3
INF 158	Multi-Cloud Development Services	3
INF 160	Server Security	3
INF 161	Introduction to Networks	3
INF 164	Switching, Routing, and Wireless Essentials	3
INF 165	Advanced Cyber Security	3
INF 166	Cloud Application Development I (REACT on AWS)	3
INF 167	Enterprise Networking, Security, and Automation	3
INF 168	AWS Cloud Practitioner	3
INF 169	Machine Learning and AI Foundations with Predictive Analytics	3
INF 170	Cloud Application Development II (Serverless REACT on AWS)	3
INF 177	AWS Solutions Architect Associate	3
INF 180	Advanced Network Security	3
INF 182	Microsoft Azure Administrator	3
INF 185	Virtual Private Cloud Administration	3
INF 187	Cloud Native Infrastructure (Kubernetes)	3
INF 188	Cloud Data and DevOps Specialist (AWS)	3
INF 191	Microsoft Enterprise O365 Administration	3
INF 193	Cloud DevOps Engineer I	3
INF 196	Cloud DevOps Engineer II	3
Total		62.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL \$13,174.00

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Information Technology Systems/Computer Support Specialist Emphasis in Cyber Security, TC

CRN	COURSE NAME	CREDITS
INF 105	A+ Certification - Essentials	3
INF 110	A+ Certification - Application	3
INF 112	Network Essentials	3
INF 115	Network+ Part I	3
INF 116	Network+ Part II	3
INF 120	Security+	3
INF 134	Server	3
INF 136	Introduction to PowerShell	3
INF	Cyber Security Electives - 12 Credits	12
INF	Experiential Learning Electives - 3 Credits	3
OPM 115	Introduction to Project Management	3
PDV 105	Blueprint for Personal Success	2
Cyber Security Electives		
INF 155	Digital Forensics	
INF 157	Cyber Law and Ethics	
INF 160	Server Security	
INF 165	Advanced Cyber Security	
Experiential Learning Electives		
INF 174	Information Technology Capstone	
INF 175	Information Technology Internship	
INF 196	Cloud DevOps Engineer II	
Total		44.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$10,342.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Instrument Rating, COC

CRN	COURSE NAME	CREDITS
PLT 120	Instrument Regulations and Procedures	3
PLT 128	Basic Attitude Instrument Flying	2
Total		5.00

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$1,929.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

Interior Design, AAS

CRN	COURSE NAME	CREDITS
INT 101	Interior Design Fundamentals	3
INT 105	Blueprint Reading for Interior Design	3
INT 110	Color Theory	3
INT 126	Textiles	3
INT 127	Materials for Interior Environments	3
INT 141	History of Furniture & Architecture	3
INT 155	Lighting Technologies	3
INT 160	Design Studio I	3
INT 165	Design Studio II	3
INT 166	AutoCAD for Interior Design	5
INT 170	Business Practices & Portfolio Development	4
INT 173	Design Studio III	3
INT 190	Drafting for Interiors	3
INT 192	Illustration for Interior Design	3
INT 193	Rendering for Interior Design	3
INT 196	Interior Design Codes & Standards	3
INT 218	Kitchen & Bath Design	3
MCD 132	Basic Chief Architect/Architectural Desktop	3
ART 100	Art Appreciation	3
CED 115	Computer Applications	3
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
SPH 101	Public Speaking	3
	Math Elective	3
Total		74.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$11,610.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Interior Design Drafter, TC

CRN	COURSE NAME	CREDITS
INT 105	Blueprint Reading for Interior Design	3
INT 166	AutoCAD for Interior Design	5
INT 190	Drafting for Interiors	3
INT 214	Revit	5
MTH 020	Math Fundamentals	3
Total		19.00

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$2,984.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

Introduction to Manufacturing, COC

CRN	COURSE NAME	CREDITS
AVC 102	Precision Instruments	1
AVC 104	Quality Control Concepts	1
AVC 110	Safety/OSHA 10	1
AVC 112	Blueprint Reading	2
MCD 106	Precision Measuring	2
MMG 131	Metallurgy	1
MFG 125	Experiential Learning Electives - 2 Credits	2
PDV 105	Blueprint for Personal Success	2
Experiential Learning Electives		
MFG 125	Manufacturing Internship	
Total		12.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 North Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$2,544.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

IT Essentials, TC

CRN	COURSE NAME	CREDITS
INF 105	A+ Certification - Essentials	
INF 110	A+ Certification - Application	
INF 112	Network Essentials	
INF 115	Network+ Part I	
INF 116	Network+ Part II	
INF 120	Security+	
PDV 105	Blueprint for Personal Success	
Total		20.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$5,776.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Kitchen & Bath Design, TC

CRN	COURSE NAME	CREDITS
INT 105	Blueprint Reading for Interior Design	3
INT 127	Materials for Interior Environments	3
INT 170	Business Practices & Portfolio Development	4
INT 190	Drafting for Interiors	3
INT 196	Interior Design Codes & Standards	3
INT 218	Kitchen & Bath Design	3
INT 222	Kitchen and Bath Technology	3
INT 223	Kitchen and Bath Studio	3
INT 226	Advanced Kitchen and Bath	3
INT	Technical Electives - 3 Credits	3
PDV 105	Blueprint for Personal Success	2
	Math Elective	3
Technical Electives		
INT 166	AutoCAD for Interior Design	
INT 192	Illustration for Interior Design	
INT 193	Rendering for Interior Design	
INT 214	Revit	
Total		36.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$5,646.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Lodging Management, AAS

CRN	COURSE NAME	CREDITS
HEM 105	Sanitation and Safety	2
HEM 115	Introduction to the Hospitality Industry	2
HEM 120	Hospitality Service Techniques	3
HEM 125	Food & Beverage Management Fundamentals	3
HEM 130	Introduction to Lodging Operations	2
HEM 135	Hospitality Human Resource Management	3
HEM 140	Hospitality Financial Management	3
HEM 145	Fundamentals of Excellent Customer Service	3
HEM 150	Food and Beverage Operations	3
HEM 155	Front Office Management	3
HEM 160	Housekeeping and Environmental Services	3
HEM 165	Revenue Management	3
HEM 170	Sales	3
HEM 195	Special Events and Meetings	3
HEM 235	Hospitality Management Internship	4
HEM	Hospitality and Events Electives 5 Credits	5
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
	Communication Elective	3
	Humanities Elective	3
	Math Elective	3
	Social Science Elective	3
Hospitality and Events Electives		
HEM 150	Food and Beverage Operations	
HEM 155	Front Office Management	
HEM 160	Housekeeping and Environmental Services	
HEM 165	Revenue Management	
HEM 170	Sales	
HEM 175	Event Catering Strategies	
HEM 180	Event Industry Fundamentals	
HEM 185	Event and Meeting Contracting	
HEM 190	Event Support Systems	
HEM 195	Special Events and Meetings	
HEM 200	Event Project Planning	
HEM 205	Alcohol Beverage Law	
HEM 210	Beer and Spirits	
HEM 215	Food and Alcohol	
HEM 220	Beverage Promotion	
HEM 225	Wine Fundamentals	
HEM 230	Mixology	
Total		65.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$10,185.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Lodging Management, TC

CRN	COURSE NAME	CREDITS
HEM 105	Sanitation and Safety	2
HEM 110	Hospitality Math	3
HEM 115	Introduction to the Hospitality Industry	2
HEM 120	Hospitality Service Techniques	3
HEM 125	Food & Beverage Management Fundamentals	3
HEM 130	Introduction to Lodging Operations	2
HEM 135	Hospitality Human Resource Management	3
HEM 140	Hospitality Financial Management	3
HEM 145	Fundamentals of Excellent Customer Service	3
HEM 150	Food and Beverage Operations	3
HEM 155	Front Office Management	3
HEM 160	Housekeeping and Environmental Services	3
HEM 165	Revenue Management	3
HEM 170	Sales	3
HEM 195	Special Events and Meetings	3
HEM 235	Hospitality Management Internship	4
PDV 105	Blueprint for Personal Success	2
Total		48.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$7,838.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Logistics and Supply Chain Management, AAS

CRN	COURSE NAME	CREDITS
LGM 101	Principles of Logistics and Supply Chain Management	3
LGM 102	Inventory Control	3
LGM 103	Contracts and Freight Claims	3
LGM 104	Computerized Logistics	3
LGM 105	Warehouse Management	3
LGM 106	Transportation and Traffic Management	3
LGM 107	Introduction to Purchasing	3
LGM 108	International Logistics	3
LGM	Experiential Learning Elective 3 Credits	3
BUS 104	Introduction to Business	3
OPM 115	Introduction to Project Management	3
	Electives 9 Credits	9
CED 115	Computer Applications	3
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
PHL 110	Ethics	3
	Communication Elective	3
	Math Elective	3
	Social Science Elective	3
Experiential Learning Electives		
LGM 190	Logistics and Supply Chain Internship	
LGM 196	Independent Study in Logistics and Supply Chain Management	
Elective		
ACC 105	Fundamentals of Accounting	
CED 117	Advanced Excel	
ECO 105	Principles of Macroeconomics	
ECO 110	Principles of Microeconomics	
OPM 105	Operational Management for Organizational Success	
PHR 105	Negotiations and Relationship Management	
	LEN 100 or MFG 100 Or OPM 100	
Total		62.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$9,242.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Logistics and Supply Chain Management, TC

CRN	COURSE NAME	CREDITS
LGM 101	Principles of Logistics and Supply Chain Management	3
LGM 102	Inventory Control	3
LGM 104	Computerized Logistics	3
LGM 105	Warehouse Management	3
LGM 106	Transportation and Traffic Management	3
LGM 108	International Logistics	3
LGM	Experiential Learning Elective	3
BUS 104	Introduction to Business	3
ENG 101	Composition I	3
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
Experiential Learning Electives		
LGM 190	Logistics and Supply Chain Internship	
LGM 196	Independent Study In Logistics and Supply Chain Management	
Total		32.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$4,938.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Machining Technology, AAS

CRN	COURSE NAME	CREDITS
MMG 113	Print Reading	3
MMG 116	Quality Control & Inspection	1
MMG 131	Metallurgy	1
MMG 155	CNC Lathe	3
MMG 156	CNC Operations	3
MMG 158	CNC Controllers	2
MMG 160	CNC Milling I	3
MMG 170	CAM I	4
MMG or MCD Or CAT		
Technical Electives - 14 Credits		14
AVC 110	Safety/OSHA 10	1
CAT 101	CATIA Part Design & Sketcher	4
CAT 105	CATIA Assembly Design	4
CAT 115	CATIA Prismatic Machining	4
MCD 106	Precision Measuring	2
CED 115	Computer Applications	3
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
Communication Elective		3
Math Elective		3
Social Science Elective		3
Technical Electives		
CAT 102	CATIA Drafting	
CAT 110	CATIA Wireframe & Surfaces	
CAT 124	CATIA Surface Machining	
MCD 201	Geometric Dimensioning & Tolerance	
MMG 115	Machining I	
MMG 126	Machining II	
MMG 130	Bench Work	
MMG 132	Machine Tool Processes	
MMG 175	CAM II	
MMG 180	CAM III	
MMG 225	Machining Internship	
Total		66.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$16,466.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Machining Technology, TC

CRN	COURSE NAME	CREDITS
MMG 113	Print Reading	3
MMG 115	Machining I	3
MMG 116	Quality Control & Inspection	1
MMG 126	Machining II	3
MMG 130	Bench Work	1
MMG 131	Metallurgy	1
MMG 132	Machine Tool Processes	1
MMG 155	CNC Lathe	3
MMG 156	CNC Operations	3
MMG 160	CNC Milling I	3
MMG 170	CAM I	4
AVC 110	Safety/OSHA 10	1
CAT 101	CATIA Part Design & Sketcher	4
CAT 105	CATIA Assembly Design	4
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
Total		40.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$11,076.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Magnetic Particle Technician, COC

CRN	COURSE NAME	CREDITS
NDT 101	Magnetic Particle Testing	3
NDT 114	Visual Inspection	2
Total		5.00

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$1,327.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

Manual Machining, TC

CRN	COURSE NAME	CREDITS
AVC 110	Safety/OSHA 10	1
MMG 113	Print Reading	3
MMG 115	Machining I	3
MMG 116	Quality Control & Inspection	1
MMG 126	Machining II	3
MMG 130	Bench Work	1
MMG 131	Metallurgy	1
MMG 132	Machine Tool Processes	1
MMG 156	CNC Operations	3
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
Total		22.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$5,938.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Multiengine Pilot, COC

CRN	COURSE NAME	CREDITS
PLT 156	Multiengine Aircraft Operation	2
PLT 160	Multiengine Flight Lab	1
Total		3.00

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$1,257.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

NC Programmer, COC

CRN	COURSE NAME	CREDITS
CAT 124	CATIA Surface Machining	3
MCD 201	Geometric Dimensioning & Tolerance	3
MMG 160	CNC Milling I	3
MMG 170	CAM I	4
Total		13.00

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$3,453.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

Nondestructive Testing, AAS

CRN	COURSE NAME	CREDITS
NDT 100	Penetrant Inspection	3
NDT 101	Magnetic Particle Testing	3
NDT 102	Radiation Safety	3
NDT 103	Radiographic Testing Level II	3
NDT 107	Radiographic Testing Level I	3
NDT 110	Eddy Current Level I	3
NDT 111	Eddy Current Level II	3
NDT 112	Ultrasonic Testing Method Level I	3
NDT 113	Ultrasonic Testing Method Level II	3
NDT 114	Visual Inspection	2
NDT 123	Advanced Ultrasonic Testing Methods	5
AVC 102	Precision Instruments	1
AVC 110	Safety/OSHA 10	1
CFT 101	Introduction to Composites	2
CED 115	Computer Applications	3
ENG 101	Composition I	3
MTH 112	College Algebra	3
PDV 105	Blueprint for Personal Success	2
PHS 110	Physical Science	5
	Communication Elective	3
	Social Science Elective	3
Total		60.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$13,690.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Nondestructive Testing, TC

CRN	COURSE NAME	CREDITS
NDT 100	Penetrant Inspection	3
NDT 101	Magnetic Particle Testing	3
NDT 102	Radiation Safety	3
NDT 103	Radiographic Testing Level II	3
NDT 107	Radiographic Testing Level I	3
NDT 110	Eddy Current Level I	3
NDT 111	Eddy Current Level II	3
NDT 112	Ultrasonic Testing Method Level I	3
NDT 113	Ultrasonic Testing Method Level II	3
NDT 114	Visual Inspection	2
NDT 123	Advanced Ultrasonic Testing Methods	5
AVC 102	Precision Instruments	1
AVC 110	Safety/OSHA 10	1
CFT 101	Introduction to Composites	2
CED 115	Computer Applications	3
MTH 050	Beginning Algebra with Review	4
PDV 105	Blueprint for Personal Success	2
Total		47.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$11,952.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Operations Management and Supervision, AAS

CRN	COURSE NAME	CREDITS
ACC 105	Fundamentals of Accounting	3
ACC 160	Principles of Accounting I	3
ACC 170	Principles of Accounting II	3
BUS 104	Introduction to Business	3
BUS 125	Business Law	3
BUS 140	Principles of Marketing	3
BUS 200	Principles of Management	3
CED 115	Computer Applications	3
ECO 105	Principles of Macroeconomics	3
ECO 110	Principles of Microeconomics	3
HIS 120	United States History since 1865	3
ENG 101	Composition I	3
LEN 100	Lean for Operations	3
OPM 105	Operations Management for Organizational Success	3
OPM 110	Introduction to Supply Chain Management	3
OPM 115	Introduction to Project Management	3
MTH 112	College Algebra	3
PSY 101	General Psychology	3
SPH 101	Public Speaking	3
	Science Elective	5
Total		62.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$9,229.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Operations Management and Supervision, TC

CRN	COURSE NAME	CREDITS
ACC 105	Fundamentals of Accounting	3
ACC 160	Principles of Accounting I	3
ACC 170	Principles of Accounting II	3
BUS 104	Introduction to Business	3
BUS 125	Business Law	3
BUS 200	Principles of Management	3
CED 115	Computer Applications	3
OPM 105	Operations Management for Organizational Success	3
OPM 110	Introduction to Supply Chain Management	3
OPM 115	Introduction to Project Management	3
SPH 101	Public Speaking	3
Total		33.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$5,105.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Operations Management, COC

CRN	COURSE NAME	CREDITS
BUS 104	Introduction to Business	3
LEN 100	Lean for Operations	3
OPM 105	Operations Management for Organizational Success	3
OPM 110	Introduction to Supply Chain Management	3
OPM 115	Introduction to Project Management	3
Total		15.00

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$2,187.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

Patient Care Technician, TC

CRN	COURSE NAME	CREDITS
CPR 001	CPR for Healthcare Providers	1
GRA 101	Certified Nurse Aide	5
GRA 119	Medication Aide	5
HHA 100	Home Health Aide	2
PCT 110	Phlebotomy and Laboratory Procedures	4
ALH 101	Medical Terminology	3
ALH 131	Diseases, Disorders & Diagnostic Procedures	2
ALH 155	Pharmacology for Allied Health	3
PDV 105	Blueprint for Personal Success	2
PCT 100	EKG for Healthcare Providers	4
ALH 110	Principles of Nutrition	3
Total		34.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

Old Town
213 N. Mead | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$5,814.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Penetrant Technician, COC

CRN	COURSE NAME	CREDITS
NDT 114	Visual Inspection	2
NDT 100	Penetrant Inspection	3
Total		5.00

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$1,339.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

Police Science, AAS

CRN	COURSE NAME	CREDITS
CRJ 101	Introduction to Criminal Justice	3
CRJ 105	Criminal Investigation	3
CRJ 110	Criminal Law	3
CRJ 115	Agency Administration	3
CRJ 120	Juvenile Delinquency and Justice	3
CRJ 125	Law Enforcement Operations and Procedures	3
CRJ 130	Criminal Procedures	3
CRJ 135	Criminal Justice Interview and Report Writing	3
CRJ 140	Professional Responsibility in Criminal Justice	3
CRJ 145	Corrections	3
CRJ 155	Policing Diverse Cultures	3
CRJ 161	Internship in Criminal Justice I	1
CRJ 162	Internship in Criminal Justice II	1
CRJ 163	Internship in Criminal Justice III	1
CRJ 180	KLETC or Equivalent Law Enforcement Academy Training	12
CED 115	Computer Applications	3
ENG 101	Composition I	3
HIS 120	United States History since 1865	3
PED 110	Lifetime Fitness	1
	Communication Elective	3
	Math Elective	3
	Social Science Elective	3
Total		67.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at watc.edu/campuses

COSTS*

PROGRAM TOTAL **\$9,204.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Police Science, COC

CRN	COURSE NAME	CREDITS
CRJ 101	Introduction to Criminal Justice	3
CRJ 135	Criminal Justice Interview and Report Writing	3
CRJ 145	Corrections	3
ENG 101	Composition I	3
	Communication Elective	3
Total		15.00

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at watc.edu/campuses

COSTS*

PROGRAM TOTAL **\$2,056.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

Police Science, TC

CRN	COURSE NAME	CREDITS
CRJ 101	Introduction to Criminal Justice	3
CRJ 105	Criminal Investigation	3
CRJ 110	Criminal Law	3
CRJ 115	Agency Administration	3
CRJ 120	Juvenile Delinquency and Justice	3
CRJ 125	Law Enforcement Operations and Procedures	3
CRJ 130	Criminal Procedures	3
CRJ 135	Criminal Justice Interview and Report Writing	3
CRJ 140	Professional Responsibility in Criminal Justice	3
CRJ 145	Corrections	3
CRJ 155	Policing Diverse Cultures	3
CRJ 161	Internship in Criminal Justice I	1
CRJ 162	Internship in Criminal Justice II	1
CRJ 163	Internship in Criminal Justice III	1
CED 115	Computer Applications	3
ENG 101	Composition I	3
PED 110	Lifetime Fitness	1
	Communication Elective	3
Total		46.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at watc.edu/campuses

COSTS*

PROGRAM TOTAL **\$6,458.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Police Science Technical Studies, AAS

CRN	COURSE NAME	CREDITS
CRJ 101	Introduction to Criminal Justice	3
CRJ 105	Criminal Investigation	3
CRJ 110	Criminal Law	3
CRJ 115	Agency Administration	3
CRJ 120	Juvenile Delinquency and Justice	3
CRJ 125	Law Enforcement Operations and Procedures	3
CRJ 130	Criminal Procedures	3
CRJ 135	Criminal Justice Interview and Report Writing	3
CRJ 140	Professional Responsibility in Criminal Justice	3
CRJ 145	Corrections	3
CRJ 155	Policing Diverse Cultures	3
CRJ 161	Internship in Criminal Justice I	1
CRJ 162	Internship in Criminal Justice II	1
CRJ 163	Internship in Criminal Justice III	1
BUS 104	Introduction to Business	3
BUS 121	Business Communications	3
BUS 125	Business Law	3
BUS 130	Personal Finance	3
BUS 200	Principles of Management	3
CED 115	Computer Applications	3
ENG 101	Composition I	3
PED 110	Lifetime Fitness	1
	Communication Elective	3
	Math Elective	3
	Social Science Elective	3
Total		67.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at watc.edu/campuses

COSTS*

PROGRAM TOTAL **\$9,568.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Powerplant, TC

CRN	COURSE NAME	CREDITS
AMT 105	Technical Mathematics	2
AMT 107	Aircraft Drawings	1
AMT 109	Physics	2
AMT 111	Materials & Processes	3
AMT 113	Basic Electricity	4
AMT 115	Weight & Balance	2
AMT 123	Cleaning & Corrosion Control	1
AMT 125	Fluid Lines & Fittings	1
AMT 127	Ground Operations & Servicing	1
AMT 131	General Review & Test	
AMT 133	Regulations, Research & Documentation	3
AMT 136	Propellers	3
AMT 200	Reciprocating Engines	7
AMT 210	Engine Fuel Systems	3
AMT 212	Engine Ignition, Starting and Electrical Systems	5
AMT 213	Engine Lubrication Systems	2
AMT 218	Engine Airflow and Fire Protection Systems	3
AMT 224	Engine Maintenance and Operation	5
AMT 227	Turbine Engines	6
AMT 231	Powerplant Review & Test	2
Total		56.00

All AMT program students are required to purchase tool kits via WSU Tech. This purchase will be made in the Airframe 2 and PowerPlant 2 semesters of the program. Tools may not be purchased outside of WSU Tech.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$17,872.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Practical Nurse, TC

CRN	COURSE NAME	CREDITS
PNR 119	KSPN Fundamentals of Pharmacology and Safe Medication Administration	2
PNR 120	KSPN Foundations of Nursing	4
PNR 121	KSPN Foundations of Nursing Clinical	2
PNR 128	KSPN Nursing Care of Adults I	5
PNR 129	KSPN Nursing Care of Adults I Clinical	3
PNR 130	KSPN Maternal Child Nursing	2
PNR 131	KSPN Maternal Child Nursing Clinical	1
PNR 135	KSPN Mental Health Nursing	2
PNR 136	Transition to Nursing	2
PNR 138	KSPN Nursing Care of Adults II	5
PNR 139	KSPN Nursing Care of Adults II Clinical	2
PNR 141	KSPN Care of Aging Adults	2
PNR 166	KSPN Leadership, Roles, and Issues	2
ALH 110	Principles of Nutrition	3
BIO 150	Human Anatomy & Physiology	5
PSY 101	General Psychology	3
PSY 120	Developmental Psychology	3
Total		48.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

Old Town
213 N. Mead | Wichita, KS 67202
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$11,180.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Private Pilot, COC

CRN	COURSE NAME	CREDITS
PLT 104	Introduction to Aviation	3
PLT 112	Private Pilot Flight Lab	2
Total		5.00

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$3,779.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

Private Security Officer Training, COC

CRN	COURSE NAME	CREDITS
PST 110	Private Security Officer Training - Basic	3
Total		3.00

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at watc.edu/campuses

COSTS*

PROGRAM TOTAL **\$423.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

Process Mechanic Painter, TC

CRN	COURSE NAME	CREDITS
ACP 100	Introduction to Coatings & Paint Technology	3
ACP 101	Surface Preparation & Coatings	4
ACP 104	Specialized Coating Processes	3
AVC 110	Safety/OSHA 10	1
AVC 112	Blueprint Reading	2
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
Total		18.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$4,302.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Professional Pilot, AAS

CRN	COURSE NAME	CREDITS
PLT 104	Introduction to Aviation	3
PLT 112	Private Pilot Flight Lab	2
PLT 108	Simulated Flight Lab I	1
PLT 116	Aviation Weather	3
PLT 120	Instrument Regulations and Procedures	3
PLT 128	Basic Attitude Instrument Flying	2
PLT 132	Aviation Safety and Human Factors	3
PLT 124	Simulated Flight Lab II	1
PLT 136	Crew Resource Management	2
PLT 140	Avionics	2
PLT 144	Introduction to Commercial Flight	2
PLT 152	Commercial Flight I	3
PLT 164	Commercial Flight II	3
PLT 148	Simulated Flight Lab III	1
PLT 156	Multiengine Aircraft Operation	2
PLT 160	Multiengine Flight Lab	1
PLT 168	Certified Flight Instruction	5
PLT 176	Certified Flight Instruction Lab	1
PLT 180	Gas Turbine Engine Systems	2
PLT 172	Simulated Flight Lab IV	1
CED 115	Computer Applications	3
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
	Communication Elective	3
	Math Elective	3
	Social Science Elective	3
Total		60.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$22,885.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

AAS Flight Hours and Estimated Costs

License/ Rating	Minimum Flight Hours	Estimated Student Flight Fees*
Semester one Private Pilot	35	\$8,855
Semester two Instrument Pilot	35	\$8,575
Semester three/four Commercial Pilot	120	\$27,600
Semester three Multiengine	20	\$8,900
Semester four Certified Flight Instructor	25	\$5,925

Tuition and Fees **\$22,885.00**

Flight Hours **\$59,855.00**

Total **\$82,740.00**

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Radiography Technician, COC

CRN	COURSE NAME	CREDITS
NDT 102	Radiation Safety	3
NDT 107	Radiographic Testing Level I	3
NDT 103	Radiographic Testing Level II	3
MTH 050	Beginning Algebra with Review	4
Total		13.00

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$3,060.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

Robotics, AAS

CRN	COURSE NAME	CREDITS
ROB 100	Introduction to Robotics	3
ROB 103	Applied Robotics Lab I	4
ROB 104	Robotics Simulation	2
ROB 106	Robotics Controller Maintenance	1
ROB 145	Applied Robotics Lab II	2
ROB 115	Introduction to Programming Robots in ROS	4
ROB 124	Robotic Navigation	2
ROB 134	Robotic Perception and Manipulation	4
ROB 120	IoT Fundamentals: Introduction to the Internet of Things	1
ROB 130	IoT Fundamentals: Connected Things	3
ROB 140	IoT Fundamentals: Big Data Analytics	3
ROB 118	Basic Circuits	3
ROB 138	Advanced PLC	3
ROB 128	Basic PLC	3
ROB	Robotics Electives - 6 Credits	6
ROB	Experiential Learning Elective - 3 Credits	3
CED 115	Computer Applications	3
ENG 101	Composition I	3
MTH 112	College Algebra	3
PDV 105	Blueprint for Personal Success	2
	Communication Elective	3
	Social Science Elective	3
Experiential Learning Electives		
ROB 170	Robotics Internship	
ROB 172	Robotics Capstone	
Robotics Electives		
ROB 155	Advanced Industrial Workcell Programming	
ROB 144	Machine Learning for Robotics	
ROB 150	IoT Security	
ROB 148	PLC System Design and Simulation	
Total		64.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$13,457.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Robotics, TC

CRN	COURSE NAME	CREDITS
ROB 100	Introduction to Robotics	3
ROB 103	Applied Robotics Lab I	4
ROB 106	Robotics Controller Maintenance	1
ROB 104	Robotics Simulation	2
ROB 145	Applied Robotics Lab II	2
ROB 138	Advanced PLC	3
ROB 118	Basic Circuits	3
ROB 128	Basic PLC	3
ROB 140	IoT Fundamentals: Big Data Analytics	3
ROB 130	IoT Fundamentals: Connected Things	3
ROB 120	IoT Fundamentals: Introduction to the Internet of Things	1
ROB 115	Introduction to Programming Robots in ROS	4
ROB 134	Robotic Perception and Manipulation	4
ROB 124	Robotic Navigation	2
PDV 105	Blueprint for Personal Success	2
Total		40.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$10,791.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Sheetmetal Apprenticeship, AAS

CRN	COURSE NAME	CREDITS
SMA 120	Sheetmetal Apprenticeship	47
BUS 121	Business Communications	3
FOL 120	Essential Spanish for the Workplace	4
PDV 105	Blueprint for Personal Success	2
SPH 101	Public Speaking	3
	Math Elective	3
Total		62.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$3,945.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Surgical Technology, AAS

CRN	COURSE NAME	CREDITS
-----	-------------	---------

SGT 101	Introduction to Surgical Technology	4
SGT 107	Pharmacology for Surgical Technology	3
SGT 115	Surgical Procedures I	5
SGT 119	Surgical Technology - Clinical Experience I	6
SGT 120	Principles and Practices in Surgical Technology	5
SGT 125	Surgical Procedures II	5
SGT 129	Surgical Technology - Clinical Experience II	7
SGT 140	Principles and Practices in Surgical Technology Lab	3
SGT 145	ST Certification Review	1
ALH 101	Medical Terminology	3
BIO 150	Human Anatomy & Physiology	5
BIO 160	Microbiology	5
CPR 001	CPR for Healthcare Providers	1
ENG 101	Composition I	3
	Communication Elective	3
	Electives - 3 credits	3
	Math Elective	3
Electives		
PSY 101	General Psychology	
SOC 101	Principles of Sociology	
Total		65.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

Old Town
213 N. Mead | Wichita, KS 67202
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$14,782.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Tooling and Fixture Fabrication, AAS

CRN	COURSE NAME	CREDITS
TFF 110	Tap and Die	1
TFF 115	Hand and Power Tools for Aerospace Tooling	1
TFF 120	Metrology	4
TFF 125	Tooling Capstone	4
TFF 135	Direct & Alternating Current	4
TFF	Experiential Learning Elective – 5 credits	5
AER 106	Aerospace Manufacturing Tooling Orientation	1
AER 150	Assembly Overview I	3
AVC 103	Geometric Dimensioning & Tolerancing	1
AVC 104	Quality Control Concepts	1
AVC 107	Fundamentals for Aerospace Manufacturing	1
AVC 110	Safety/OSHA 10	1
CWG 105	Welding Safety & Orientation	1
CWG 110	Welding Applications	4
MCD 101	Introduction to CAD I	3
MCD 102	Introduction to CAD II	2
MCD 106	Precision Measuring	2
MMG 113	Print Reading	3
MMG 115	Machining I	3
MMG 126	Machining II	3
CED 115	Computer Applications	3
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
	Communication Elective	3
	Math Elective	3
	Social Science Elective	3
	Experiential Learning Electives	
TFF 150	Fixture Construction	
TFF 155	Tooling and Fixture Fabrication Capstone	
Total		65.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$15,279.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Tooling and Fixture Fabrication, TC

CRN	COURSE NAME	CREDITS
TFF 110	Tap and Die	1
TFF 115	Hand and Power Tools for Aerospace Tooling	1
TFF 120	Metrology	4
TFF 125	Tooling Capstone	4
TFF 135	Direct & Alternating Current	4
TFF	Experiential Learning Elective - 5 Credits	5
AER 106	Aerospace Manufacturing Tooling Orientation	1
AER 150	Assembly Overview I	3
AVC 103	Geometric Dimensioning & Tolerancing	1
AVC 104	Quality Control Concepts	1
AVC 107	Fundamentals for Aerospace Manufacturing	1
AVC 110	Safety/OSHA 10	1
CWG 105	Welding Safety & Orientation	1
CWG 110	Welding Applications	4
MCD 101	Introduction to CAD I	3
MCD 102	Introduction to CAD II	2
MCD 106	Precision Measuring	2
MMG 113	Print Reading	3
MMG 115	Machining I	3
MMG 126	Machining II	3
PDV 105	Blueprint for Personal Success	2
Experiential Learning Electives		
TFF 150	Fixture Construction	
TFF 155	Tooling And Fixture Fabrication Capstone	
Total		50.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$13,169.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Ultrasonic Technician, COC

CRN	COURSE NAME	CREDITS
NDT 112	Ultrasonic Testing Method Level I	3
NDT 113	Ultrasonic Testing Method Level II	3
NDT 123	Advanced Ultrasonic Testing Methods	5
Total		11.00

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$3,039.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

Unmanned Aircraft, AAS

CRN	COURSE NAME	CREDITS
UAS 105	Fundamentals of Drone Technology	2
UAS 110	AC/DC	4
UAS 115	Ground School	3
UAS 120	Communication/Navigation	3
UAS 125	GIS I	3
UAS 130	MultiRotor I	3
UAS 135	Flight Planning	2
UAS 140	MultiRotor II	3
UAS 145	GIS II	3
UAS 150	Photogrammetry	3
UAS 155	Sensor Packages	4
UAS 160	Design and Programming	4
UAS 165	FixedWing UAS Flight	3
UAS	Experiential Learning Electives - 4	4
CED 115	Computer Applications	3
ENG 101	Composition I	3
MTH 112	College Algebra	3
PDV 105	Blueprint for Personal Success	2
	Communication Elective	3
	Social Science Elective	3
	Experiential Learning Electives	
UAS 173	UAS Capstone	
UAS 175	UAS Internship	
Total		61.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$13,333.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Unmanned Aircraft, TC

CRN	COURSE NAME	CREDITS
UAS 105	Fundamentals of Drone Technology	2
UAS 110	AC/DC	4
UAS 115	Ground School	3
UAS 120	Communication/Navigation	3
UAS 125	GIS I	3
UAS 130	MultiRotor I	3
UAS 135	Flight Planning	2
PDV 105	Blueprint for Personal Success	2
Total		22.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$5,237.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Veterinary Assistant, COC

CRN	COURSE NAME	CREDITS
VET 102	Introduction to Veterinary Assisting/ Animal Science	1
VET 106	Veterinary Practice Management	1
VET 116	Laboratory and Diagnostic Skills	1
VET 121	Veterinary Assisting I	1
VET 141	Veterinary Assisting II	1
Total		5.00

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$1,035.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

Veterinary Nursing, AAS

CRN	COURSE NAME	CREDITS
VET 110	Veterinary Anatomy and Physiology	4
VET 130	Veterinary Emergency, Critical Medicine and Hospital Procedures	2
VET 215	Veterinary Clinical Pathology II	3
VET 220	Veterinary Nursing Procedures II	2
VET 230	Veterinary Diagnostic Imaging with Lab	3
VET 240	Veterinary Anesthesia and Surgical Assisting	3
VET 250	Veterinary Nursing: Large Animal Disease and Medical Care	2
VET 260	Veterinary Clinical Pathology III	3
VET 265	Veterinary Nursing Procedures: Avian, Exotic and Lab Animals Disease and Medical Care	2
VET 270	Veterinary Nursing Seminar	1
VET 275	Veterinary Clinical Practicum	6
VET	Electives 13 Credits	13
BIO 110	Principles of Biology	5
CED 115	Computer Applications	3
CHM 110	General Chemistry	5
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
	Communication Elective	3
	Math Elective	3
Electives		
VET 101	Introduction to Veterinary Nursing or VET 102 and 103	
VET 102	Introduction to Veterinary Assisting/Animal Science	
VET 103	Introduction to Veterinary Nursing Part 2	
VET 105	Veterinary Business Procedures/Office Management Or VET 106 and 107	
VET 106	Veterinary Practice Management	
VET 107	Veterinary Business Procedures/Office Management Part 2	
VET 115	Veterinary Clinical Pathology I OR VET 116 and 117	
VET 116	Laboratory and Diagnostic Skills	
VET 117	Veterinary Clinical Pathology I Part 2	
VET 120	Veterinary Nursing Procedures I Or VET 121 and 122	
VET 121	Veterinary Assisting I	
VET 122	Veterinary Nursing Procedures I Part 2	
VET 140	Veterinary Pharmacology Or VET 141 and 142	
VET 141	Veterinary Assisting II	
VET 142	Veterinary Pharmacology Part 2	
Total		68.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

WSU South
3821 E. Harry | Wichita, KS 67218
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$13,005.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Welding, AAS

CRN	COURSE NAME	CREDITS
CWG 103	Blue Print Reading for Welders	2
CWG 105	Welding Safety & Orientation	1
CWG 115	SMAW	3
CWG 116	SMAW II	4
CWG 120	GMAW	3
CWG 121	GMAW II	4
CWG 125	GTAW	3
CWG 126	GTAW II	4
CWG 141	Oxy Acetylene Welding & Cutting	2
CWG 145	Fabrication & Design	2
CWG 149	Materials & Testing	2
Technical Elective Credits - 12 (4 of the required credits must come from either CWG 242 or CWG 243)		12
AVC 110	Safety/OSHA 10	1
CED 115	Computer Applications	3
ENG 101	Composition I	3
PDV 105	Blueprint for Personal Success	2
Communication Elective		3
Math Elective		3
Social Science Elective		3
Technical Electives		
CWG 110	Welding Applications	
CWG 130	Robotic Welding	
CWG 155	Flux Cored Arc Welding	
CWG 160	Welding Internship	
CWG 242	SMAW D1.1 Qualification	
CWG 243	GMAW D1.1 Qualification	
MCD 101	Introduction to CAD I	
MCD 102	Introduction to CAD II	
Total		60.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$15,227.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Welding Fast Track GMAW, TC

CRN	COURSE NAME	CREDITS
CWG 103	Blue Print Reading for Welders	2
CWG 105	Welding Safety & Orientation	1
CWG 120	GMAW	3
CWG 121	GMAW II	4
CWG 141	Oxy Acetylene Welding & Cutting	2
AVC 110	Safety/OSHA 10	1
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
Total		18.00

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$4,632.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

Welding Fast Track SMAW, TC

CRN	COURSE NAME	CREDITS
CWG 103	Blue Print Reading for Welders	2
CWG 105	Welding Safety & Orientation	1
CWG 115	SMAW	3
CWG 116	SMAW II	4
CWG 141	Oxy Acetylene Welding & Cutting	2
AVC 110	Safety/OSHA 10	1
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
Total		18.00

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$4,746.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of
elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages
from WSU Tech graduates.

Welding Fast Track, TC

CRN	COURSE NAME	CREDITS
CWG 103	Blue Print Reading for Welders	2
CWG 105	Welding Safety & Orientation	1
CWG 141	Oxy Acetylene Welding & Cutting	2
CWG	Technical Electives - 7 Credits	7
AVC 110	Safety/OSHA 10	1
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
Technical Electives		
CWG 115	SMAW	
CWG 116	SMAW II	
CWG 120	GMAW	
CWG 121	GMAW II	
Total		18.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

City Center
301 S. Grove | Wichita, KS 67211
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$4,689.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.

Welding, TC

CRN	COURSE NAME	CREDITS
CWG 103	Blue Print Reading for Welders	2
CWG 105	Welding Safety & Orientation	1
CWG 115	SMAW	3
CWG 116	SMAW II	4
CWG 120	GMAW	3
CWG 121	GMAW II	4
CWG 125	GTAW	3
CWG 126	GTAW II	4
CWG 141	Oxy Acetylene Welding & Cutting	2
CWG 145	Fabrication & Design	2
CWG 149	Materials & Testing	2
	Technical Electives - 4 Credits	4
AVC 110	Safety/OSHA 10	1
MTH 020	Math Fundamentals	3
PDV 105	Blueprint for Personal Success	2
	Technical Electives	
CWG 110	Welding Applications	
CWG 130	Robotic Welding	
CWG 155	Flux Cored Arc Welding	
CWG 160	Welding Internship	
CWG 242	SMAW D1.1 Qualification	
CWG 243	GMAW D1.1 Qualification	
MCD 101	Introduction to CAD I	
MCD 102	Introduction to CAD II	
Total		40.00

*Some courses may have a prerequisite in addition to the classes listed above. Please contact an Academic Advisor for details. Visit WSUtech.edu/checklist for program admission requirements.

LOCATION

National Center for Aviation Training
4004 N. Webb Road | Wichita, KS 67226
316.677.9400 Get maps at wsutech.edu/campuses

COSTS*

PROGRAM TOTAL **\$11,171.00**

*Cost does not include online fees, books or tools.
Financial Assistance may be available to those who qualify.
Total calculated based on the lowest cost combination of elective credits required.

PLACEMENT & WAGE DATA

www.WSUTECH.edu/placement

Get historical data on job placement rates and average wages from WSU Tech graduates.



COURSE DESCRIPTIONS

ACC 104 Computerized Accounting

Course Information

Description	Emphasizes a fundamental understanding of corporate and cost accounting. Topics include: accounting for a corporation, statement of cash flows, cost accounting, budgeting and long term liabilities. Laboratory work demonstrates theory presented in class.
Total Credits	3

Pre/Corequisites

Prerequisite	ACC 105 Fundamentals of Accounting
Prerequisite	CED 115 Computer Applications

ACC 105 Fundamentals of Accounting

Course Information

Description	This is a course designed for students who want a working knowledge of accounting, but not to the extent as a person working primarily in the accounting field. Although the basic accounting principles are learned and applied, the course, in comparison to Principles of Accounting I, covers a smaller amount of material at a somewhat slower pace. It is recommended for students with no previous accounting background.
Total Credits	3

ACC 130 Managerial Accounting

Course Information

Description	This course studies management tools for business decision making, including study of the evaluation of financial condition and performance of business. Emphasis is given to the process of formulating and utilizing sound accounting data to evaluate alternatives involved in managerial
--------------------	--

decision-making necessary for planning, execution, and control of a business enterprise.

Total Credits 3

Pre/Corequisites

Prerequisite ACC 170 Principles of Accounting II

ACC 152 Payroll Accounting

Course Information

Description Provides an understanding of the laws that affect a company's payroll structure and practical application skills in maintaining payroll records. Topics include payroll tax laws, payroll tax forms, payroll and personnel records, computing wages and salaries, taxes affecting employees and employers and analyzing and journalizing payroll transactions. Provides first-hand experience in calculating payroll, completing payroll taxes and preparing records and reports. Topics include payroll tax entries, preparing payroll registers and maintaining employees' earnings records using computerized software.

Total Credits 3

Pre/Corequisites

Prerequisite ACC 105 Fundamentals of Accounting

ACC 160 Principles of Accounting I

Course Information

Description This course is designed to help the students develop a basic understanding of accounting theory, concepts and procedures. It will provide a foundation for further study for the student seeking a career in accounting or business administration or for the student entering into the occupational field.

Total Credits 3

Pre/Corequisites

Prerequisite ACC 105 Fundamentals of Accounting

ACC 170 Principles of Accounting II

Course Information

Description This course is a continuation of ACC 160 Principles of Accounting I. It is a study of corporations which includes organization and operations; stockholders' equity, earnings and dividends; long term assets and liabilities, investments, income tax and their effort on business decisions; and assessing a company's financial performance.

Total Credits 3

Pre/Corequisites

Prerequisite ACC 160 Principles of Accounting I

ACP 100 Introduction to Coatings & Paint Technology

Course Information

Description The objective of this course is to discuss the fundamentals of paint composition, application, and processing. As such, basic ingredients of paint properties will be discussed. Paint selection, performance criteria, application methods, defects, problem resolution, future paint and raw materials needs will be discussed.

Total Credits 3

Pre/Corequisites

Prerequisite AVC 110 OSHA/Safety

ACP 101 Surface Preparation & Coatings

Course Information

Description This course is a study of surface preparation from various coating and painting applications on all interior and exterior aircraft components. The content includes safety procedures including hazardous waste, surface preparations techniques, material application techniques and effectively using industry based technologies.

Total Credits 4

Pre/Corequisites

Prerequisite ACP 100 Introduction to Coatings & Paint Technology

Prerequisite MTH 020 Math Fundamentals

ACP 102 Performance & Durability of Coatings

Course Information

Description The objective of this course is to discuss facts and findings affecting performance and permanence of coatings. Topics include: methods of enhancing durability and permanence, properties and selection of raw materials processes leading to robust coatings, service – life prediction, and coating evaluation.

Total Credits 3

Pre/Corequisites

Prerequisite ACP 101 Surface Preparation & Coatings

ACP 103 Color Technology

Course Information

Description This course is a study of the fundamentals of visual color match evaluation and of color measurement for industrial color control. Students utilize industry appropriate technologies on projects that demonstrate proper lighting, observe testing, objective terminology for color difference and determination of tolerances. Students analyze measurement data of the

same industrial sample to study the correlation of visual to measured results

Total Credits 3

Pre/Corequisites

Prerequisite ACP 101 Surface Preparation & Coatings

ACP 104 Specialized Coating Processes

Course Information

Description This course is a study in special coatings for aerospace structures. Topics include mixing, application and curing coating materials, environmental effects of coating materials and general and hazardous material handling safety. The course also covers equipment used in these processes.

Total Credits 3

Pre/Corequisites

Prerequisite ACP 101 Surface Preparation and Coatings

ACP 105 Specialized Detailing

Course Information

Description This course provides instruction in the equipment, material, and techniques used in the application of special paints. Emphasis will be placed on aircraft refinishing procedures. Topics include: safety; paint identification; equipment use and maintenance; color application; original finish sealing; panel-spot repair and blending; thinners, reducers, and additives; and composite materials, plastics, and rubber refinishing.

Total Credits 3

Pre/Corequisites

Prerequisite ACP 103 Color Technology

ACP 106 Aerospace Coatings & Materials

Course Information

Description This course covers advanced technologies for coating materials and applications. Topics include: coating technologies that address aesthetics, durability, and environmental issues.

Total Credits 3

Pre/Corequisites

Prerequisite ACP 102 Performance and Durability of Coatings

Prerequisite ACP 105 Specialized Detailing

ACP 107 Aerospace Program Management

Course Information

Description This course will introduce basic program management skills and techniques. Topics covered include: role of project management, communication, interpersonal skills, schedule management, interfacing with other units, project management software use, compliance reporting, and risk management.

Total Credits 3

Pre/Corequisites

Prerequisite ACP 104 Specialized Coatings Processes

Prerequisite ACP 106 Aerospace Coatings & Materials

ACP 110 Integrated Assembly Capstone Project

Course Information

Description	This course addresses the full spectrum of the Coating Technicians role within the industry. Problem solving strategies within a team concept will be emphasized. Industry and applied research projects will be assigned.
Total Credits	4

Pre/Corequisites

Prerequisite	ACP 100 Introduction to Coatings and Paint Technology
Prerequisite	ACP 101 Surface Preparation and Coatings
Prerequisite	ACP 102 Performance and Durability of Coatings
Prerequisite	ACP 103 Color Technology
Prerequisite	ACP 104 Specialized Coatings Processes
Prerequisite	ACP 105 Specialized Detailing
Prerequisite	ACP 106 Aerospace Coatings and Materials
Prerequisite	ACP 107 Aerospace Program Management

ACP 111 Technical Co-Operative Project

Course Information

Description	Students will work on a part-time basis in a job directly related to applied technologies. The employer and supervising instructor will evaluate students' progress. Upon course completion, students will be able to apply skills and knowledge in an employment setting.
Total Credits	4

Pre/Corequisites

Prerequisite	ACP 107 Aerospace Program Management
--------------	--------------------------------------

ACP 115 Introduction to Airbrush

Course Information

Description	This course is designed as an introduction to airbrush paint. The ability to draw is not mandatory, patience is helpful. Topics covered in this class
--------------------	---

include a brief history and structure of the airbrush, comparing types and uses for different models and proper cleaning and managing of airbrush equipment. Instruction on the proper triggering and holding of the airbrush, control exercises and various techniques will be addressed.

Total Credits 3

ACP 120 Intermediate Airbrush I

Course Information

Description This course deals with promoting advanced technique skills that have been implemented in the introduction airbrush course and begin building a student portfolio. Students will have both required technique projects and student initiated subject matters in this course.

Total Credits 3

Pre/Corequisites

Prerequisite ACP 115 Introduction to Airbrush

ACP 125 Intermediate Airbrush II

Course Information

Description This course deals with the continued progression of advanced technique skills that have been implemented in previous airbrush courses and building a student portfolio. Students will have both required technique projects and student initiated subject matters in this course.

Total Credits 3

Pre/Corequisites

Prerequisite ACP 120 Intermediate Airbrush II

ACP 160 Advanced Airbrush

Course Information

Description This course deals with refining advanced technique skills that have been implemented in previous airbrush courses and building a student portfolio. Students will have both required technique projects and student initiated subject matters in this course. Students will learn how to prepare and submit their airbrush work for art competition.

Total Credits 3

Pre/Corequisites

Prerequisite ACP 125 Intermediate Airbrush II

ACR 112 HVAC Fundamentals

Course Information

Description This course is designed to introduce students to the HVAC industry. Topics include: basic HVAC concepts and theories of refrigeration, the laws of thermodynamics, pressure and temperature relationships, heat transfer, refrigerant identification, the refrigeration cycle. Technical skills will be introduced in soldering, brazing and refrigerants. Additionally, students will become familiar with trade related organizations, safety and job requirements.

Total Credits 4

ACR 113 Electrical Fundamentals

Course Information

Description Students will be introduced to basic electrical theory for DC and AC systems. The students will become familiar with the production of electricity and how to apply Ohm's Law and Power Formula. Additional topics include electrical safety, reading and interpreting schematic designs.

Total Credits 4

ACR 116 Workplace Skills

Course Information

Description	Upon successful completion of this course, the student should be able to identify the job skills necessary to have a successful career in the field of their choice. Topics include: listening skills, oral communication, human relations, decision making/problem solving, how to work as a team, time and resource management, work ethics, career planning and resume building.
Total Credits	1

ACR 117 Intro to Mechanical Refrigeration

Course Information

Description	The students will apply knowledge previously learned in HVAC Fundamentals to Ice Machines, refrigerators and commercial coolers. Students will learn the function of the specialized electrical circuits and how to service, repair and maintain these systems.
Total Credits	4

Pre/Corequisites

Prerequisite	ACR 112 HVAC Fundamentals
--------------	---------------------------

ACR 118 Electrical Fundamentals II

Course Information

Description	Students will be introduced to motor theory and explore motor applications. This course builds on previous knowledge gained in Electrical Fundamentals I and requires a firm understanding of magnetism and voltage production. Motor trouble shooting will be introduced. Types of motors covered will be single phase motors, three phase and ECM motors.
Total Credits	3

Pre/Corequisites

Prerequisite ACR 113 Electrical Fundamentals

ACR 119 Advanced Electrical Theory for HVAC

Course Information

Description Advanced Electrical Theory for HVAC is a continuation of Electrical Fundamentals I & II, and places an emphasis on developing systematic diagnosis and troubleshooting methods and procedures that will enable the student to become a highly-skilled, professional HVAC-R service technician.

Total Credits 2

Pre/Corequisites

Prerequisite ACR 118 Electrical Fundamentals II

ACR 121 Heating System Fundamentals

Course Information

Description This course will provide students a firm understanding of combustion and how it is applied in the HVAC industry. Residential gas furnaces will be studied in detail to gain understanding in service and installation, including standard, mid-range, and high efficiency furnaces.

Total Credits 3

Pre/Corequisites

Prerequisite ACR 119 Advanced Electrical Theory for HVAC

ACR 122 Heating System Fundamentals II

Course Information

Description	The Heating System Fundamentals II course is designed to walk students thorough the requirements of the Uniform Mechanical Code in relation to Gas Piping and exhaust ventilation. Students will gain a thorough understanding and be able to apply skills in sizing vents and pipe upon completion of this course.
Total Credits	2

Pre/Corequisites

Prerequisite	ACR 117 Intro to Mechanical Refrigeration
--------------	---

ACR 123 Heat Loads and Duct Sizing

Course Information

Description	The course will teach students to analyze heat flow characteristics as they study heat loss and heat gain factors as it pertains to residential HVAC design. Topics will include the effects of selected materials and the layout of the system for the purpose of trouble shooting, load estimation and duct sizing.
Total Credits	2

Pre/Corequisites

Prerequisite	ACR 121 Heating System Fundamentals
--------------	-------------------------------------

ACR 124 Advanced Heating Systems

Course Information

Description	This course will introduce students to electric furnaces and hydronic heating with an emphasis on the electrical systems of those units and code requirements for the safe installation of such equipment. Indoor air quality will be discussed in detail as a major factor in human comfort.
Total Credits	3

Pre/Corequisites

Prerequisite ACR 123 Heat Loads and Duct Sizing

ACR 126 EPA 608

Course Information

Description This course prepares students for the certification exam required by federal and state governments and the heating, ventilation, air conditioning and refrigeration (HVAC/R) industry. Students focus on Environmental Protection Agency (EPA) refrigerant handling exams and Industry Competency Exams (ICE).

Total Credits 1

ACR 127 Heat Pumps

Course Information

Description The student will learn basic functions of heat pump designs, charging, and trouble shooting.

Total Credits 3

Pre/Corequisites

Prerequisite ACR 117 Intro to Mechanical Refrigeration

Prerequisite ACR 121 Heating System Fundamentals

ACR 128 Commercial HVAC

Course Information

Description This course will introduce students to the commercial applications of various HVAC systems. A strong foundation in refrigeration theory is

required as well as a comprehensive understanding of system airflow and electrical fundamentals. Students who complete this course will be skilled in reading advanced electrical schematics and be able to describe the function and application of various commercial systems and components including Direct Digital Control systems and frequency drives. This is a capstone course.

Total Credits 4

Pre/Corequisites

Prerequisite ACR 127 Heat Pumps

ACR 129 Commercial HVAC Lab

Course Information

Description This course continues the introduction to commercial HVAC systems through hands-on training. Students will perform basic maintenance, repairs and troubleshooting on functioning light commercial and commercial equipment.

Total Credits 4

Pre/Corequisites

Prerequisite ACR 128 Commercial HVAC

ACR 140 Sheet Metal Fabrication I

Course Information

Description Upon successful completion of this course, the student will be able to identify the components, equipment, and operations associated with sheet metal layout and fabrication. Duct sizing and code requirements for duct systems are also discussed.

Total Credits 3

AER 106 Aerospace Manufacturing Tooling Orientation

Course Information

Description This course provides an overview of the Tooling safety hazards, traits employers value, various roles and responsibilities within advanced manufacturing teams and what elements are necessary to make a manufacturing company successful.

Total Credits 1

Pre/Corequisites

Prerequisite AVC103 Geometric Dimensioning & Tolerancing
Prerequisite AVC104 Quality Control Concepts
Prerequisite AVC 107 Fundamentals for Aerospace Manufacturing
Prerequisite AVC 110 Safety/OSHA 10

AER 111 Tap and Die

Course Information

Description This course provides knowledge and technical skills on taps and dies. Topics include 60 degree thread form, common fastener thread series and markings on taps. The student will learn the process of hand tapping, the process of repairing a thread with a threading die and the process of installing a threaded insert.

Total Credits 1

Pre/Corequisites

Prerequisite AER 106 Aerospace Manufacturing Tooling Orientation

AER 115 Aerostructures Assembly

Course Information

Description Students will master the techniques associated with aerospace mechanical assembly. Topics include the identification, installation and removal of fasteners, sealant applications, component assembly, wing structures, fuselage structures, curved surfaces, and repair techniques. Students learn in an environment which combines interactive online delivery of theoretical content with hands on application in a state of the art assembly laboratory.

Total Credits 6

Pre/Corequisites

Prerequisite AVC 127 Aviation Assembly Core or the following AVC courses
Prerequisite AVC 102 Precision Instruments
Prerequisite AVC 104 Quality Control Concepts
Prerequisite AVC 110 Safety/OSHA 10
Prerequisite AVC 112 Blueprint Reading
Prerequisite AVC 120 Introduction to Sealing
Prerequisite AVC 140 Electrical Bonding & Grounding
Corequisite MTH 020 Math Fundamentals

AER 116 Hand and Power Tools for Aerospace Tooling

Course Information

Description This course provides technical knowledge on hand power tools used by a toolmaker in the aerospace industry. The student will learn about die grinders, disco grinders and magnetic drills.

Total Credits 1

Pre/Corequisites

Prerequisite AER 111 Tap & Die

AER 126 Tooling Capstone

Course Information

Description This course provides the specific technical knowledge and skills necessary to utilize hand and power tools to create a drill jig. This course emphasizes the importance of critical features, the process of permanent assembly and the role of toolmakers in the manufacturing environment.

Total Credits 4

Pre/Corequisites

Prerequisite AER 116 Hand and Power Tools for Aerospace Tooling
Prerequisite AER 150 Assembly Overview I

AER 135 Quality Assurance Orientation

Course Information

Description This course provides an overview of the Quality Assurance Program. The course includes an overview of the expectations of the program, potential safety hazards, traits employers value, various role and responsibilities within advanced manufacturing teams and what elements are necessary to make a manufacturing company successful.

Total Credits 1

Pre/Corequisites

Prerequisite AVC 102 Precision Instruments
Prerequisite AVC 104 Quality Control Concepts
Prerequisite AVC 105 Aircraft Familiarization
Prerequisite AVC 107 Fundamentals for Aerospace Manufacturing
Prerequisite AVC 108 Aircraft System & Components
Prerequisite AVC 110 Safety/OSHA 10
Prerequisite AVC 112 Blueprint Reading
Prerequisite AVC 120 Introduction to Sealing

Prerequisite	AVC 125 Bonding & Grounding
Prerequisite	AVC 140 Electrical Bonding & Grounding
Prerequisite	AVC 135 Hand Tools

AER 140 Assembly Mechanic Orientation

Course Information

Description	This course provides an overview of the technical and mechanical knowledge and skills necessary to qualify for employment in the aerospace industry as an assembly mechanic. The course presented using interactive online content.
Total Credits	1

AER 150 Assembly Overview I

Course Information

Description	This course is designed to provide the student with a general overview of assembly techniques used in aviation. Working in a hands-on setting, students will learn the basics of aircraft assembly while focusing on inspection techniques. Students learn in an environment which combines interactive online delivery of theoretical content with hands on application in a state of the art assembly laboratory.
Total Credits	3

Pre/Corequisites

Prerequisite	AVC 103 Geometric Dimensioning & Tolerancing
Prerequisite	AVC 104 Quality Control Concepts
Prerequisite	AVC 107 Fundamentals for Aerospace Manufacturing
Prerequisite	AVC 108 Aircraft System & Components
Prerequisite	AVC 110 Safety/OSHA 10

AER 155 Aerospace Plumbing

Course Information

Description	This course is designed to develop basic theory and knowledge of aircraft fluid lines and fittings. Students will participate in hands on projects with an emphasis on inspection techniques used in the aviation industry.
Total Credits	2

Pre/Corequisites

Prerequisite	AVC 102 Precision Instruments
Prerequisite	AVC 103 Geometric Dimensioning & Tolerancing
Prerequisite	AVC 104 Quality Control Concepts
Prerequisite	AVC 105 Aircraft Familiarization
Prerequisite	AVC 107 Fundamentals for Aerospace Manufacturing
Prerequisite	AVC 108 Aircraft System & Components
Prerequisite	AVC 110 Safety/OSHA 10
Prerequisite	AVC 120 Introduction to Sealing
Prerequisite	AVC 125 Bonding & Grounding
Prerequisite	AVC 130 Assembly Mechanic Orientation
Prerequisite	AVC 135 Hand Tools
Prerequisite	AVC 112 Blueprint Reading

AER 165 Electrical Assembly Mechanic Orientation

Course Information

Description	The electrical certificate educational program is a tremendous opportunity for you to learn technical skills that are needed for employment in the aerospace manufacturing industry. Your participation in this program is a unique opportunity for you to set a course for success on your career journey. This course exposes students to the potential to a good career in the electrical wiring installation portion of aircraft manufacturing.
--------------------	---

Total Credits 1

Pre/Corequisites

Prerequisite	AVC 102 Precision Instruments
Prerequisite	AVC 104 Quality Control Concepts
Prerequisite	AVC 105 Aircraft Familiarization
Prerequisite	AVC 107 Fundamentals for Aerospace Manufacturing
Prerequisite	AVC 108 Aircraft System & Components
Prerequisite	AVC 110 Safety/OSHA 10
Prerequisite	AVC 112 Blueprint Reading
Prerequisite	AVC 120 Introduction to Sealing
Prerequisite	AVC 125 Bonding & Grounding
Prerequisite	AVC 135 Hand Tools

AER 166 Electrical Hand Tools

Course Information

Description This course familiarizes the student with various hand tools and connectors used in the installation of electrical wiring in aerospace manufacturing.

Total Credits 1

Pre/Corequisites

Prerequisite	AVC 102 Precision Instruments
Prerequisite	AVC 104 Quality Control Concepts
Prerequisite	AVC 105 Aircraft Familiarization
Prerequisite	AVC 107 Fundamentals for Aerospace Manufacturing
Prerequisite	AVC 108 Aircraft System & Components
Prerequisite	AVC 110 Safety/OSHA 10
Prerequisite	AVC 112 Blueprint Reading
Prerequisite	AVC 120 Introduction to Sealing
Prerequisite	AVC 125 Bonding & Grounding
Prerequisite	AVC 135 Hand Tools

Prerequisite AER 165 Electrical Assembly Mechanic Orientatin

AER 167 Basic Drilling & Riveting/Ground Stud Installation

Course Information

Description This course familiarizes the student with power tools and acquired skills used in drilling a quality hole and installing driven fasteners. In conjunction with this procedure, Ground Studs will be installed and electrical resistance verified.

Total Credits 2

Pre/Corequisites

Prerequisite	AVC 102 Precision Instruments
Prerequisite	AVC 104 Quality Control Concepts
Prerequisite	AVC 105 Aircraft Familiarization
Prerequisite	AVC 107 Fundamentals for Aerospace Manufacturing
Prerequisite	AVC 108 Aircraft System & Components
Prerequisite	AVC 110 Safety/OSHA 10
Prerequisite	AVC 112 Blueprint Reading
Prerequisite	AVC 120 Introduction to Sealing
Prerequisite	AVC 125 Bonding & Grounding
Prerequisite	AVC 135 Hand Tools
Corequisite	AVC 140 Electrical Bonding & Grounding
Prerequisite	AER 165 Electrical Assembly Mechanic Orientation

AER 168 Wire Installation Drawings

Course Information

Description	This course familiarizes with the various drawings utilized in aerospace wire bundle installation, includes engineering drawing review, wire bundle installation paperwork and electrical production illustrations.
--------------------	---

Total Credits	1
----------------------	---

Pre/Corequisites

Prerequisite	AVC 110 Safety/OSHA 10
Prerequisite	AVC 105 Aircraft Familiarization
Prerequisite	AVC 107 Fundamentals for Aerospace Manufacturing
Prerequisite	AVC 112 Blueprint Reading
Prerequisite	AVC 120 Introduction to Sealing
Prerequisite	AVC 125 Bonding & Grounding
Prerequisite	AVC 135 Hand Tools

AER 169 Crimping & Cables

Course Information

Description	This course familiarizes the student with specifications and skills required to strip insulation from wires, crimp connectors on wires, install connectors on coaxial cables, install connectors in plugs and manufacture a wire bundle according to a blueprint.
--------------------	---

Total Credits	2
----------------------	---

Pre/Corequisites

Prerequisite	AVC 102 Precision Instruments
Prerequisite	AVC 104 Quality Control Concepts
Prerequisite	AVC 105 Aircraft Familiarization
Prerequisite	AVC 107 Fundamentals for Aerospace Manufacturing
Prerequisite	AVC 108 Aircraft System & Components
Prerequisite	AVC 110 Safety/OSHA 10
Prerequisite	AVC 112 Blueprint Reading
Prerequisite	AVC 120 Introduction to Sealing
Prerequisite	AVC 125 Bonding & Grounding

Prerequisite	AVC 135 Hand Tools
Prerequisite	AVC 140 Electrical Bonding & Grounding
Prerequisite	AER 165 Electrical Assembly Mechanic Orientation
Corequisite	AER 175 Wire Bundle Basics

AER 170 Fiber Optics for Aerospace

Course Information

Description	This course familiarizes the student with the advantages and disadvantages of the use of Fiber Optics in aircraft. Included are overviews how Fiber Optics works, manufacturing processes, handling of Fiber Optics and particulars of quality and safety.
Total Credits	1

Pre/Corequisites

Prerequisite	AVC 102 Precision Instruments
Prerequisite	AVC 104 Quality Control Concepts
Prerequisite	AVC 105 Aircraft Familiarization
Prerequisite	AVC 107 Fundamentals for Aerospace Manufacturing
Prerequisite	AVC 108 Aircraft System & Components
Prerequisite	AVC 110 Safety/OSHA 10
Prerequisite	AVC 112 Blueprint Reading
Prerequisite	AVC 120 Introduction to Sealing
Prerequisite	AVC 125 Bonding & Grounding
Prerequisite	AVC 135 Hand Tools
Prerequisite	AER 165 Electrical Assembly Mechanic Orientation.

AER 175 Wire Bundle Basics

Course Information

Description	This course familiarizes the student with wiring in airplanes, wire and cable basics, wire markings, documents used in wire bundle installation, circular connectors and contacts, connector installation, MTC connectors and tying wire bundles.
--------------------	---

Total Credits	1
----------------------	---

Pre/Corequisites

Prerequisite	AVC 110 Safety/OSHA 10
Prerequisite	AVC 112 Blueprint Reading
Prerequisite	AVC 105 Aircraft Familiarization
Prerequisite	AVC 107 Fundamentals for Aerospace Manufacturing
Prerequisite	AVC 108 Aircraft System & Components
Prerequisite	AVC 120 Introduction to Sealing
Prerequisite	AVC 125 Bonding & Grounding
Prerequisite	AVC 135 Hand Tools

AER 180 Soldering

Course Information

Description	The soldering course acquaints the student with the proper way to safely perform soldering procedures in aviation applications. The importance of correct procedures is emphasized as the student performs wire stripping along with various soldering and de-soldering operations.
--------------------	---

Total Credits	1
----------------------	---

Pre/Corequisites

Prerequisite	AVC 102 Precision Instruments
Prerequisite	AVC 104 Quality Control Concepts
Prerequisite	AVC 105 Aircraft Familiarization
Prerequisite	AVC 107 Fundamentals for Aerospace Manufacturing
Prerequisite	AVC 108 Aircraft System & Components
Prerequisite	AVC 110 Safety/OSHA 10
Prerequisite	AVC 112 Blueprint Reading

Prerequisite	AVC 120 Introduction to Sealing
Prerequisite	AVC 125 Bonding & Grounding
Prerequisite	AVC 135 Hand Tools
Prerequisite	AER 165 Electrical Assembly Mechanic Orientation,
Prerequisite	AER 166 Electrical Hand Tools

AER 185 Wire Bundle Installation

Course Information

Description	This course familiarizes with the requirements for wire bundle installation culminating in the installation of several wire bundles on a project board.
Total Credits	2

Pre/Corequisites

Prerequisite	AVC 102 Precision Instruments
Prerequisite	AVC 104 Quality Control Concepts
Prerequisite	AVC 105 Aircraft Familiarization
Prerequisite	AVC 107 Fundamentals for Aerospace Manufacturing
Prerequisite	AVC 108 Aircraft System & Components
Prerequisite	AVC 110 Safety/OSHA 10
Prerequisite	AVC 112 Blueprint Reading
Prerequisite	AVC 120 Introduction to Sealing
Prerequisite	AVC 125 Bonding & Grounding
Prerequisite	AVC 135 Hand Tools
Prerequisite	AVC 140 Electrical Bonding & Grounding
Prerequisite	AER 165 Electrical Assembly Mechanic Orientation
Prerequisite	AER 166 Electrical Hand Tools
Prerequisite	AER 175 Wire Bundle Basics
Prerequisite	AER 169 Crimping & Cables
Prerequisite	AER 168 Wire Installation Drawings.

AFV 110 Electrical I

Course Information

Description	In this course students will: Complete service work orders; describe the relationship between voltage, ohms and amperage; perform basic electrical circuit repairs; identify electrical system faults; identify basic wiring diagram symbols, components, and legend information; perform basic electrical circuit measurements using a DVOM; describe basic circuit characteristics of series, parallel and series parallel circuits through a variety of classroom and shop learning and assessment activities.
Total Credits	3

AFV 120 Electrical II

Course Information

Description	In this course students will: Perform battery diagnosis; perform battery service; perform starting system diagnosis; perform starting system repair; perform charging system diagnosis; perform charging system repair; identify current flow on starting and charging system diagrams through a variety of learning and assessment activities.
Total Credits	5

Pre/Corequisites

Prerequisite	AFV 110 Electrical I
--------------	----------------------

AFV 125 Manual Transmission/Transaxle & Drive Train

Course Information

Description	This course contains competencies that can be used in their entirety within a single course or as needed for courses designed by a Kansas institution as Institutional Flexible Credit. Through a variety of learning and assessment
--------------------	--

activities students can: determine the general drive train diagnosis procedures; explore the fundamentals of clutch operation; explore the fundamentals of clutch removal, inspection and repair; determine the powerflow of the manual transmission and transaxle; perform fundamental manual transmission and transaxle inspection and repair according to service specifications; perform fundamental differential inspection and repair according to service specifications; perform fundamental diagnosis, inspection and replacement of drive axle shafts and supporting components; perform fundamental diagnosis, inspection, adjustment and repair of four- and all-wheel drive components; diagnose drive train issues; diagnose clutch concerns; perform the removal, inspection and/or repair of the clutch and its components; conduct a transmission and transaxle inspection and repair according to service specifications; conduct a differential inspection and repair according to service specifications; conduct the diagnosis, inspection and replacement of drive axle shafts and supporting components; conduct the diagnosis, inspection, adjustment and repair of four- and all-wheel drive components.

Total Credits 4

AFV 130 Suspension and Steering I

Course Information

Description In this course students will: document fundamental suspension system concerns; perform fundamental diagnostics of steering systems; perform fundamental repairs of steering systems; perform fundamental diagnostics of suspension systems; perform fundamental repairs of suspension systems; determine the need for wheel alignment and adjustment; perform fundamental diagnostics of wheel and tire systems; perform fundamental repairs of wheel and tire systems through a variety of learning and assessment activities.

Total Credits 3

AFV 135 Introduction to Alternative Fuels

Course Information

Description	Students will use various sources in the alternative fueled vehicle industry to learn what alternative fuels are available. Students will examine the need for alternative fuels including: Propane, Natural Gas, Ethanol and Biodiesel. Students will also learn about new technologies such as Electric Drive and Hydrogen fueled vehicles as well as Fuel Economy and Idle Reduction considerations.
Total Credits	3

AFV 140 Engine Repair

Course Information

Description	Through a variety of learning and assessment activities students can: explore the theory and operation of internal combustion engine; demonstrate the ability to remove an automotive engine; demonstrate the ability to install an automotive engine; demonstrate the basic ability to inspect and repair cylinder head, valve trains and timing defects; demonstrate the ability to disassemble short block; demonstrate the ability to inspect short block; demonstrate the ability to repair short block; demonstrate the ability to reassemble short block; demonstrate the basic ability to inspect and repair engine lubrication; demonstrate the basic ability to inspect and repair engine cooling systems; inspect a cylinder head and valve train; repair a cylinder head and valve train; perform advanced level engine diagnosis.
Total Credits	4

AFV 145 Hybrid Systems & Maintenance

Course Information

Description	This course introduces the student to the features of the Internal Combustion Engine (ICE) as they apply to the hybrid vehicle, hybrid drive systems (transaxles and gears), brake systems, HVAC systems, and cooling systems service. First responder, predictive maintenance procedures, hybrid trucks, and Belted Alternator System (BAS) are also examined.
Total Credits	3

AFV 150 Electric/Fuel Cell Technology

Course Information

Description	This course is designed to help prepare the student to enter the automotive repair and service industry in the area of alternative fuels and advanced technology vehicles. It is an intensive study of vehicle electric and fuel cell theory, application, installation, diagnosis, service and safety regulations.
Total Credits	1

AFV 155 High Voltage Battery Technology & Management

Course Information

Description	This course introduces the student to high voltage battery technology: electrical service safety precautions and personal protection, high voltage tools and equipment usage, battery energy management hardware systems, battery removal and installation, and battery rebuilding. The student will also be introduced to AC induction electric machines, permanent magnet electric machines, power inverter systems, electric propulsion sensing systems, communication networks, and predictive maintenance.
Total Credits	3

AFV 160 Brakes I

Course Information

Description	In this course students will Perform system pressure and travel calculations utilizing Pascal's Law; Complete service work orders; Determine appropriate system pressure tests utilizing service specifications; Determine brake system concerns and necessary actions; Diagnose poor stopping, pulling or dragging concerns caused by malfunctions in the hydraulic system; Determine how to inspect, fabricate and/or replace brake lines and hoses;
--------------------	--

Determine the service specifications pertaining to the removal, cleaning and refinishing procedures on brake drums; Apply drum brake repair and replacement procedures; Diagnose poor stopping noise vibration, pulling, grabbing, dragging or pedal pulsation concerns on disc-brake vehicles; Determine disc brake repair and replacement procedures; Determine how to caliper piston retractions; Diagnose wheel bearing noise, wheel shimmy and vibration concerns; Determine how to remove, inspect and replace bearing and hub assemblies through a variety of classroom and lab/shop learning and assessment activities.

Total Credits 3

AFV 165 Introduction to CNG and LPG Conversion, Installation & Maintenance

Course Information

Description This course introduces the student to high voltage battery technology: electrical service safety precautions and personal protection, high voltage tools and equipment usage, battery energy management hardware systems, battery removal and installation, and battery rebuilding. The student will also be introduced to AC induction electric machines, permanent magnet electric machines, power inverter systems, electric propulsion sensing systems, communication networks, and predictive maintenance.

Total Credits 1

AFV 170 Automotive Computer Systems

Course Information

Description In this course students will: Perform automotive computer system diagnosis; perform vehicle communication diagnosis; perform engine computer system diagnosis; transmission computer diagnosis; perform air bag system diagnosis; perform heating and air conditioning electronic diagnosing; perform electronic anti-lock brake/traction/stability diagnosis; perform driver assistance system diagnosis; identify computer systems through a variety of learning and assessment activities.

Total Credits 3

AFV 175 Automatic Transmission Repair

Course Information

Description This course contains competencies that can be used in their entirety within a single course or as needed for courses designed by a Kansas institution as Institutional Flexible Credit. Through a variety of learning and assessment activities students can: explore the concept of theory and operation of automatic transmissions/transaxles; perform maintenance on an automatic transmission/transaxle; perform service on an automatic transmission/transaxle; diagnose automatic transmission/transaxles; inspect automatic transmission/transaxles; remove and reinstall automatic transmission; remove and reinstall automatic transaxles; disassemble automatic transmission and components; disassemble automatic transaxles and components; inspect automatic transmission components; inspect automatic transaxles and components; repair automatic transmission and components; repair automatic transaxles and components; reassemble automatic transmission and components; reassemble automatic transaxles and components.

Total Credits 4

AFV 180 Heating & Air Conditioning

Course Information

Description This course contains competencies that can be used in their entirety within a single course or as needed for courses designed by a Kansas institution as Institutional Flexible Credit. Through a variety of learning and assessment activities students can: explore the fundamentals of automotive HVAC operations and environmental concerns, identify the appropriate refrigerant recovery and recycling guidelines; service refrigerant, recycling and handling systems; document fundamental heating and air conditioning system concerns; perform fundamental diagnostics of A/C systems; perform fundamental diagnostics of refrigeration systems components; perform fundamental repairs of refrigeration systems components; perform fundamental diagnostics of heating, ventilation, and engine cooling systems; perform fundamental repairs of heating, ventilation, and engine

cooling systems; perform fundamental diagnostics of operating systems and related controls; perform fundamental repairs of operating systems and related controls; perform complex diagnostics of A/C Systems; document complex heating and air conditioning system concerns; perform complex diagnostics of refrigeration system components; perform complex repairs of refrigeration system components; perform complex diagnostics of heating, ventilation, and engine cooling systems.

Total Credits 4

ALH 101 Medical Terminology

Course Information

Description Presents basic principles of medical word-building. The study develops competencies in the basic elements forming medical words, categorizing major suffixes and group prefixes. Anatomical, physiological and pathological terms are reviewed so students better understand special medical procedures. This is the introductory course in medical terminology and is intended for all who desire knowledge in this subject.

Total Credits 3

ALH 105 First Aid & CPR

Course Information

Description This course is designed to show the student how to deal with respiratory emergencies that could lead to cardiac arrest, how to give first aid for cardiac emergencies, also to obtain knowledge for prevention and first aid treatment of common emergencies as outlined by The American Red Cross.

Total Credits 3

ALH 110 Principles of Nutrition

Course Information

Description	Designed to help students increase their knowledge concerning their personal state of nutrition using self-studies and computer analysis. Upon completion of this course the student will be able to evaluate a person's state of nutrition considering the impact of social, scientific, psychological, political, and environmental influences upon eating patterns and habits.
Total Credits	3

ALH 115 Pharmacology

Course Information

Description	This course will provide the basic pharmacology principles with an emphasis on a broad discussion of the primary medications in each of the pharmaceutical classification categories. This course is designed to meet the pharmacology needs of students enrolled in pre-allied health majors and would be beneficial for others in the allied health field who desire a greater understanding or pharmacological principles related to diseases, effects of drugs on different systems of the body, interaction of drugs, side effects, contraindications and effectiveness in relation to dosages.
Total Credits	3

Pre/Corequisites

Prerequisite ALH 101 Medical Terminology or BIO 150 Human Anatomy & Physiology

ALH 121 Legal and Ethical Issues in Healthcare

Course Information

Description	This course introduces various ethical and moral issues in the context of healthcare and medical professions. This course will examine ethical issues related to healthcare such as: beginning of life issues, healthcare policy/distribution, healthcare law, at risk populations, doctor-patient relationships, healthcare research/technology, and end of life decision making in consideration of various sociocultural, socioeconomic, and lifestyle factors. This course will also overview moral theories such as: utilitarianism, deontology, and virtue ethics and relate these theories to decision making processes at global and local levels.
--------------------	--

Total Credits 3

ALH 130 Emergency Preparedness for Health Professionals

Course Information

Description This course is designed to provide health care professionals with an orientation for their possible future roles in disaster response and the importance of staying within the scope of practice of the profession. Students will be prepared to meet the expectations of their employers, to volunteer effectively, and to be confident and safe responders.

Total Credits 1

ALH 131 Diseases, Disorders & Diagnostic Procedures

Course Information

Description Course focuses on diseases and disorders by body systems that are frequently diagnosed and treated in the medical setting as well as the common diagnostic procedures used in the diagnostic process.

Total Credits 2

ALH 135 Spanish for Health Care Providers

Course Information

Description This workshop is designed to provide health care providers with basic and practical knowledge of the Spanish language as applied in the medical field. Students will be prepared to facilitate medical care delivery to their Spanish

speaking clients. Emphasis will be placed on ability to communicate and develop a vocabulary according to the needs of each participant.

Total Credits 1

ALH 155 Pharmacology for Allied Health

Course Information

Description Focuses on knowledge and skills necessary for safe and therapeutic drug therapy. Emphasis is placed on drug identification and classification, pharmacological actions, side effects, as well as the legal and ethical considerations of pharmacology.

Total Credits 3

ALH 175 Pathophysiology

Course Information

Description This course focuses on the essential mechanisms of disordered function which produces common diseases. Common diseases are discussed, implementing examples of the basic processes covered. This is an introductory course that prepares students entering the medical field with accessible, useable and practical information.

Total Credits 4

Pre/Corequisites

Prerequisite BIO 150 Human Anatomy & Physiology

AMT 011 Materials & Processes

Course Information

Description This course is designed to develop correct and safe usage of aircraft hardware with specific emphasis on Federal Aviation

Administration Regulations that pertain to the Airframe and Powerplant mechanic. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.

AMT 018 Engine Airflow and Fire Protection Systems

Course Information

Description This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to aircraft Induction & Airflow systems, Cooling systems, Exhaust Systems, Reverser Systems and engine fire detection and extinguishing systems. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to the Aircraft Powerplant Mechanic rating. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.

AMT 020 Airframe Inspection

Course Information

Description This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to airframe inspection. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to Airframe Subject #28. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.

AMT 105 Technical Mathematics

Course Information

Description	This course is designed to provide the technical math principles required for the Airframe and/or Powerplant mechanic. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.
Total Credits	2

AMT 107 Aircraft Drawings

Course Information

Description	This course is designed to develop theory and knowledge of blueprint reading skills with specific emphasis on Federal Aviation Administration Regulations that pertain to the Airframe and/or Powerplant mechanic. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.
Total Credits	1

AMT 109 Physics

Course Information

Description	This course is designed to develop the basic principles, fundamentals, and technical procedures of physics as they relate to the Airframe and/or Powerplant rating. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.
Total Credits	2

AMT 111 Materials & Processes

Course Information

Description	This course is designed to develop correct and safe usage of aircraft hardware with specific emphasis on Federal Aviation Administration Regulations that pertain to the Airframe and Powerplant
--------------------	--

mechanic. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.

Total Credits 3

AMT 112 Assembly & Rigging

Course Information

Description This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to aircraft Assembly and Rigging. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to the Airframe mechanic. Academic standard for passing this class is a minimum of 78% for the written and Lab project exam.

Total Credits 3

Pre/Corequisites

Prerequisite	AMT 179 Aircraft Sheetmetal & Non-Metallic Structures
Prerequisite	AMT 108 Aircraft Coverings
Prerequisite	AMT 167 Aircraft Welding
Prerequisite	AMT 159 Aircraft Fuel Systems
Prerequisite	AMT 153 Hydraulic & Pneumatic Power Systems

AMT 113 Basic Electricity

Course Information

Description A course designed to provide the technical skills to apply the electrical and electronic principles required of the Airframe and/or Powerplant mechanic. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.

Total Credits 4

AMT 115 Weight & Balance

Course Information

Description	This course is designed to calculate and apply aircraft weight and balance principles as required of the Airframe and/or Powerplant mechanic. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.
Total Credits	2

AMT 120 Airframe Inspection

Course Information

Description	This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to airframe inspection. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to Airframe Subject #28. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.
Total Credits	3

AMT 123 Cleaning & Corrosion Control

Course Information

Description	This course is designed to develop basic theory and knowledge of cleaning and corrosion control with specific emphasis on Federal Aviation Administration Regulations that pertain to the Airframe and/or Powerplant rating. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.
Total Credits	1

AMT 125 Fluid Lines & Fittings

Course Information

Description	This course is designed to develop basic theory and knowledge of aircraft fluid lines and fittings with specific emphasis on Federal Aviation Administration Regulations that pertain to Airframe and/or Powerplant mechanics. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.
Total Credits	1

AMT 127 Ground Operations & Servicing

Course Information

Description	This course is designed to develop safe skills and technical knowledge in Ground Handling procedures with special emphasis on Federal Aviation Administration Regulations that pertain to the Airframe and Powerplant mechanic. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.
Total Credits	1

AMT 131 General Review & Test

Course Information

Description	Upon completion of the General curriculum this course is designed to prepare the student for the FAA Written, Oral and Practical exams.
--------------------	---

Pre/Corequisites

Prerequisite	AMT 105 Technical Math
Prerequisite	AMT 109 Physics
Prerequisite	AMT 113 Basic Electricity
Prerequisite	AMT 107 Aircraft Drawings

Prerequisite	AMT 123 Cleaning & Corrosion Control
Prerequisite	AMT 127 Ground Operations & Service
Prerequisite	AMT 115 Weight & Balance
Prerequisite	AMT 111 Materials & Processes
Prerequisite	AMT 125 Fluid Lines & Fittings
Prerequisite	AMT 133 Regulations, Research, & Documentation

AMT 133 Regulations, Research & Documentation

Course Information

Description This course is designed to develop basic theory and knowledge of maintenance publications, forms & records with specific emphasis on Federal Aviation Administration Regulations that pertain to the Airframe and/or Powerplant rating. Academic standard for passing this class is a minimum of 78 percent for the written and Lab project exams.

Total Credits 3

AMT 136 Propellers

Course Information

Description This course is designed to develop correct safety practices, comprehensive knowledge, and the technical skills required for aircraft propeller maintenance procedures, with specific emphasis on Federal Aviation Administration Regulations that pertain to Powerplant Mechanic rating. Academic standard for passing this class is a minimum of 78 % (percent) for the written and Lab Project exams.

Total Credits 3

Pre/Corequisites

Prerequisite	AMT 200 Reciprocating Engines
Prerequisite	AMT 227 Turbine Engines
Prerequisite	AMT 213 Engine Lubrication System

AMT 151 Aircraft Electrical Systems

Course Information

Description	This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to aircraft electrical systems. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to Airframe Subjects #48, #49, and #50. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.
Total Credits	5

AMT 153 Hydraulic & Pneumatic Power Systems

Course Information

Description	This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to hydraulic and pneumatic power systems. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to Airframe Subjects #30, #31, and #32. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.
Total Credits	2

AMT 154 Landing Gear, Position, & Warning Systems

Course Information

Description	This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to aircraft landing gear, Position, & Warning systems.
--------------------	---

The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to Airframe Subjects #29, #51, #52. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.

Total Credits 3

AMT 159 Aircraft Fuel Systems

Course Information

Description This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to aircraft fuel systems. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to Airframe Subjects #41, #42, #43, #44, #45, #46, and #47. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.

Total Credits 2

AMT 165 Cabin Atmosphere Control Systems

Course Information

Description This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to cabin atmosphere control systems. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to Airframe Subjects #33, #34, and #35. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.

Total Credits 2

AMT 166 Fire, Ice & Rain Control

Course Information

Description This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to fire, ice, & rain control systems. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to Airframe Subjects #53, #54 and #55. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.

Total Credits 1

AMT 167 Aircraft Welding

Course Information

Description This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to airframe aircraft welding. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to the Airframe mechanic. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.

Total Credits 1

AMT 172 Communication, Navigation, & Instruments

Course Information

Description This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to communication and navigation systems. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to Airframe Subjects #36, #37, #38, #39, and #40. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.

Total Credits 2

AMT 179 Aircraft Sheet Metal & Non-Metallic Structures

Course Information

Description This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to airframe aircraft sheet metal structures, wood structures, composites and other non-metallic structures. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to the Airframe mechanic. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.

Total Credits 8

AMT 182 Aircraft Coverings and Finishes

Course Information

Description This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to aircraft coverings and finishes. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to the Airframe Mechanic. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.

Total Credits 2

AMT 186 Airframe Review & Test

Course Information

Description Upon completion of the Airframe curriculum this course is designed to prepare the student for the FAA Written, Oral and Practical exams.

Total Credits 2

Pre/Corequisites

Prerequisite	AMT 151 Aircraft Electrical Systems
Prerequisite	AMT 165 Cabin Atmosphere Control Systems
Prerequisite	AMT 120 Airframe Inspection
Prerequisite	AMT 154 Landing Gear, Position, & Warning Systems
Prerequisite	AMT 166 Fire, Ice, & Rain Control
Prerequisite	AMT 172 Communication, Navigation, & Instruments

AMT 200 Reciprocating Engines

Course Information

Description This course is designed to develop safety practices, comprehensive knowledge and the technical skills that are required for maintenance and operations of reciprocating engines, with specific emphasis on Federal Aviation Administration Regulations that relate to the Powerplant Mechanic rating. Academic standard for passing this class is a minimum of 78% for the written and Lab Project exams.

Total Credits 7

AMT 210 Engine Fuel Systems

Course Information

Description This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to aircraft fuel and fuel metering systems. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to the Aircraft Powerplant Mechanic rating. Academic standard for passing this class is a minimum of 78 percent for the written and Lab project exams.

Total Credits 3

AMT 212 Engine Ignition, Starting and Electrical Systems

Course Information

Description	This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to aircraft engine ignition, starting & electrical systems. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to the Aircraft Powerplant Mechanic rating. Academic standard for passing this class is a minimum of 78 percent for the written and Lab project exams.
Total Credits	5

AMT 213 Engine Lubrication Systems

Course Information

Description	This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to aircraft lubrication systems. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to the Aircraft Powerplant Mechanic rating. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.
Total Credits	2

AMT 218 Engine Airflow and Fire Protection Systems

Course Information

Description	This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to aircraft Induction & Airflow systems, Cooling systems, Exhaust Systems, Reverser Systems and engine fire detection and
--------------------	--

extinguishing systems. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to the Aircraft Powerplant Mechanic rating. Academic standard for passing this class is a minimum of 78% for the written and Lab project exams.

Total Credits 3

AMT 224 Engine Maintenance and Operation

Course Information

Description This course is designed to develop correct safety practices, comprehensive knowledge, and technical skills required to perform maintenance procedures relevant to aircraft engine inspection, instrumentation, overall maintenance and operation of aircraft engines. The curriculum is designed to meet specific Federal Aviation Administration Regulations that pertain to the Aircraft Powerplant Mechanic rating. Academic standard for passing this class is a minimum of 78 percent for the written and Lab project exams.

Total Credits 5

AMT 227 Turbine Engines

Course Information

Description This course is designed to develop safety practices, comprehensive knowledge and the technical skills that are required for the maintenance and operation of aircraft turbine engines, with specific emphasis on Federal Aviation Administration Regulations that relate to the Powerplant Mechanic rating. Academic standard for passing this class is a minimum of 78% for the written and Lab Project exams.

Total Credits 6

AMT 231 Powerplant Review & Test

Course Information

Description	Upon completion of the Power plant curriculum this course is designed to prepare the student for the FAA Written, Oral and Practical exams.
Total Credits	2

Pre/Corequisites

Prerequisite	AMT 200 Reciprocating Engines
Prerequisite	AMT 227 Turbine Engines
Prerequisite	AMT 213 Engine Lubrication Systems
Prerequisite	AMT 136 Propellers
Prerequisite	AMT 212 Engine Ignition, Starting and Electrical Systems
Prerequisite	AMT 218 Engine Airflow and Fire Protection Systems
Prerequisite	AMT 224 Engine Maintenance and Operation

AMT 250 Accelerated Certification - General/AirFrame

Course Information

Description	This review course assists the student in preparation for FAA testing for the Mechanic's Airframe License. Topics covered include: Technical Math, Physics, Basic Electricity, Aircraft Drawings, Maintenance Forms, Mechanic Privileges, Ground Operations, Weight & Balance, Materials & Processes, Fluid Lines & Fittings, Cleaning & Corrosion, Sheet Metal, Wood Structures, Aircraft Coverings, Aircraft Finishes, Welding, Aircraft Fuel Systems, Hydraulic/Pneumatic Systems, Assembly & Rigging, Aircraft Landing Gear Systems, Position & Warning Systems, Aircraft Electrical Systems, Fire Protection Systems, Ice & Rain Control Systems, Cabin Atmosphere & Control, Aircraft Instrument Systems, Communication & Navigation, and Airframe Inspection.
Total Credits	3

AMT 251 Accelerated Certification - General/Powerplant

Course Information

Description This review course assists the student in preparation for FAA testing for the Mechanic's Airframe and Powerplant License. Topics covered include: Technical Math, Physics, Basic Electricity, Aircraft Drawings, Maintenance Forms, Mechanic Privileges, Ground Operations, Weight & Balance, Materials & Processes, Fluid Lines & Fittings, Cleaning & Corrosion, Reciprocating Engines, Turbine Engines, Engine Fuel Systems, Auxiliary Power Units, Propellers, Engine Instrument Systems, Engine Fire Protection Systems, Engine Electrical Systems, Ignition & Starting Systems, Engine Lubrication Systems, Engine Cooling Systems, Fuel Metering Systems, Induction & Airflow Systems, Engine Exhaust & Reverser Systems, and Engine Inspection.

Total Credits 3

Pre/Corequisites

Students must meet the experience requirements of FAR 65.71 Eligibility Requirements and 65.77 Experience Requirements.

Students are expected to have a Microsoft device with an 8.1 operating system.

Provide full records pertaining to work history and documentation of prior experience to determine eligibility. Students will be provided a pamphlet designed to assist them with the determination of their eligibility in meeting the experience requirements.

Need to have received an 8610-2 Airman Certificate Authorization form from the FAA prior to attending class.

AMT 252 Accelerated Certification - General/Airframe/Powerplant

Course Information

Description This review course assists the student in preparation for FAA testing for the Mechanic's Airframe and Powerplant License. Topics covered include: Technical Math, Physics, Basic Electricity, Aircraft Drawings, Maintenance Forms, Mechanic Privileges, Ground Operations, Weight & Balance,

Materials & Processes, Fluid Lines & Fittings, Cleaning & Corrosion, Sheet Metal, Wood Structures, Aircraft Coverings, Aircraft Finishes, Welding, Aircraft Fuel Systems, Hydraulic/Pneumatic Systems, Assembly & Rigging, Aircraft Landing Gear Systems, Position & Warning Systems, Aircraft Electrical Systems, Fire Protection Systems, Ice & Rain Control Systems, Cabin Atmosphere & Control, Aircraft Instrument Systems, Communication & Navigation, Airframe Inspection, Reciprocating Engines, Turbine Engines, Engine Fuel Systems, Auxiliary Power Units, Propellers, Engine Instrument Systems, Engine Fire Protection Systems, Engine Electrical Systems, Ignition & Starting Systems, Engine Lubrication Systems, Engine Cooling Systems, Fuel Metering Systems, Induction & Airflow Systems, Engine Exhaust & Reverser Systems, and Engine Inspection.

Total Credits 5

Pre/Corequisites

Students must meet the experience requirements of FAR 65.71 Eligibility Requirements and 65.77 Experience Requirements.

Students are expected to have a Microsoft device with an 8.1 operating system.

Provide full records pertaining to work history and documentation of prior experience to determine eligibility. Students will be provided a pamphlet designed to assist them with the determination of their eligibility in meeting the experience requirements.

Need to have received an 8610-2 Airman Certificate Authorization form from the FAA prior to attending class.

ART 100 Art Appreciation

Course Information

Description This course is designed to develop a personal appreciation of art. By combining a study of concepts and artist's work, the student should improve one's judgment and ability to understand art critically.

Total Credits 3

ARU 110 Composite Fabrication

Course Information

Description	This course will begin with the fundamentals of composite theory in an interactive online environment. Students then apply the concepts to industry-based projects. Topics include materials, ply orientation, equipment, and processes of tool prep, hand lay-up, bonding, vacuum bagging, trim, and assembly.
Total Credits	4

ARU 115 Sheetmetal Assembly

Course Information

Description	Provides instruction in the fundamentals of sheetmetal assembly, meeting set production standards, and the use of common aircraft sheetmetal tools and materials. Students learn how to identify fasteners, install and remove fasteners, assemble sheetmetal components and identify and maintain proper “skin” quality. Students will apply math, precision instrument, blueprint reading, and safety skills to industry-based projects.
Total Credits	4

ARU 120 Composite Repair I

Course Information

Description	This course begins with an understanding of the inspection process during repair procedures. Emphasis will be placed on the importance of documentation in the inspection of repair. This course utilizes online, classroom and laboratory learning environments. In the lab setting students will learn to effectively remove the finish, disassemble and remove damaged composite material. Students will learn how to replace, vacuum bag and cure projects using hot bonders. Special attention will be paid to developing the student’s tactile skills in all of these areas.
Total Credits	4

Pre/Corequisites

Prerequisite	ARU 110 Composite Fabrication
--------------	-------------------------------

ARU 125 Advanced Assembly

Course Information

Description	Provides students with instruction in advanced assembly techniques including dimpling, repair, sealing, removal, and replacement of fasteners, and skills required to assemble fuselage and related skin assemblies. Emphasis is placed on the demonstration and practice of techniques in the laboratory setting. Repair techniques and the more difficult applicable skills for aviation manufacturing are the focus of this course.
Total Credits	4

Pre/Corequisites

Prerequisite	ARU 115 Sheetmetal Assembly
--------------	-----------------------------

ARU 130 Electrical Assembly

Course Information

Description	This course will provide students with hands-on experience with shop grade test equipment while performing experiments using LabVolt Computer-Aided Instructional Electrical/Electronics Training System. Laboratory experiments are conducted on pre-assembled boards maximizing student productivity and allowing increased instructor interaction and support.
Total Credits	4

ARU 135 Electronics Basics

Course Information

Description	The student will learn methods of construction and repair of avionics system wiring harnesses. Students will learn and perform practice exercises
--------------------	---

with the most common types of aircraft connectors, tooling, and wiring systems used in today's aircraft.

Total Credits 4

ARU 140 Composite Repair II

Course Information

Description Students will expand on process and techniques introduced in composite repair I. Students will utilize repair techniques to complete multilayer composite repairs on airplane fuselages or analogous items. Emphasis will be placed on taper sanding techniques and proper repair ply orientation.

Total Credits 4

Pre/Corequisites

Prerequisite ARU 120 Composite Repair I

ARU 145 Machining Basics

Course Information

Description Students will learn to identify basic lines, views, and abbreviations used in blueprints, interpret basic 2 D sketches using orthographic projections and blueprints, determine dimensions of features of simple parts, sketch simple parts with dimensional measurements, and determine dimensions of a multi-feature part. Students will then learn to develop math skills for machine tool operations, perform preventive maintenance and housekeeping on conventional mills and lathes, select work holding devices for mills, lathes and other machine tools, calculate feeds and speeds, remove material using milling and turning processes, use a vertical mill to center drill, drill and ream holes, change tools and tool holders on milling machines.

Total Credits 4

ARU 150 Advanced Measuring Instruments

Course Information

Description	In this course, students will learn advanced measuring techniques that allow them to earn an NC3 certification in 3D printing.
Total Credits	4

ARU 155 Aerospace Paint

Course Information

Description	Students will learn the fundamentals of paint composition, application, and processing. As such, basic ingredients of paint properties will be discussed. Paint selection, performance criteria, application methods, defects, problem resolution, future paint and raw materials needs will be discussed. Additionally, students will learn concepts related to surface preparation from various coating and painting applications on all interior and exterior aircraft components. The content also includes safety procedures regarding hazardous waste as well as more advanced industry-based surface preparation and material application techniques. Students will receive NC3 PPE Certifications.
Total Credits	4

ARU 160 Process Mechanic

Course Information

Description	Students will be trained in a variety of process including: masking, grinding, deburring, sanding, priming, measuring, anodizing, schematic reading, blending, detailing, hazardous material handling, Students will receive NC3 PPE Certification.
Total Credits	4

ARU 165 Aviation Fundamentals of Quality

Course Information

Description This course is designed to familiarize the students with the concepts and practices of Lean Manufacturing as applied in industry today. Students begin with a discussion of Lean Manufacturing's place in the overall process of continuous improvement. Students will then move on to learning to apply basic elements of lean, lean system design, lean tools, and measurement methods to industry based scenarios. This course also provides an overview of the materials and processes used in manufacturing high performance, lightweight, and reliable structures for aerospace products. Emphasis is placed on process evaluation techniques that can be extrapolated to other system areas such as new products and new technology.

Total Credits 4

ARU 170 Aviation Assembly Core

Course Information

Description In this course, students will engage with the critical aspects of Aviation Manufacturing assembly. The core topics will include safety, precision measurement, blueprint reading, sealing, and electrical bonding techniques as well as quality control.

Total Credits 7

AVC 102 Precision Instruments

Course Information

Description This course provides students with the knowledge and skills needed to utilize precision measurement tools in the manufacturing and aerospace environment. In an on line interactive environment students will learn to utilize the different types of tools, interpret the measurement results and apply those results to industry specific scenarios.

Total Credits 1

Pre/Corequisites

Corequisite MTH 020 Math Fundamentals

AVC 103 Geometric Dimensioning & Tolerancing

Course Information

Description Provides an understanding of the basic terms and principles of Geometric Dimensioning and Tolerancing. The course provides students with the skills and knowledge necessary to identify GD&T symbols and how to interpret those symbols. This course is taught using an interactive online environment.

Total Credits 1

AVC 104 Quality Control Concepts

Course Information

Description This course covers quality assurance principles including the history of the quality movement, group problem solving, data collection, control charts, statistical methods such as statistical process control (SPC), process capability studies, and the concepts associated with lean manufacturing.

Total Credits 1

AVC 105 Aircraft Familiarization

Course Information

Description This course is designed to provide an introduction to the world of aviation. Using an interactive online environment, students will be introduced to basic aerospace concepts including the history of flight, principles of flight,

and the role of regulation in the industry and the primary assemblies and structures of an airplane.

Total Credits 1

AVC 107 Fundamentals for Aerospace Manufacturing

Course Information

Description This course provides an overview of the materials and processes used in manufacturing high performance, lightweight, and reliable structures for aerospace products. Emphasis is placed on process evaluation techniques that can be extrapolated to other system areas such as new products and new technology. Instruction will take place using an interactive on line environment.

Total Credits 1

AVC 108 Aircraft Systems & Components

Course Information

Description This course is designed to provide the aviation student with an in-depth knowledge of the major systems and components of the aircraft. Using an interactive on line environment students will learn the operation of each of the major systems.

Total Credits 4

AVC 110 Safety/OSHA 10

Course Information

Description The 10- Hour General Industry Outreach training Program is intended to provide entry-level general industry workers broad awareness on recognizing and preventing hazards on a general industry site. The training covers a variety of safety and health hazards which a worker may encounter

at a general industry site. OSHA recommends this training as an orientation to occupational safety and health. Workers must receive additional training on hazards specific to their job. Training will emphasize hazard identification, avoidance, control and prevention, not OSHA standards. Instructional time will be a minimum of 10 hours.

Total Credits 1

AVC 112 Blueprint Reading

Course Information

Description This course is an introduction to reading and interpreting blueprints. Topics include blueprint views, lines, dimensions and tolerances and blueprint symbols. Working in an interactive online environment students' learn a systematic approach to reading blueprints.

Total Credits 2

AVC 117 Hand & Power Tools

Course Information

Description This course provides the technical knowledge used in Aviation and Manufacturing areas related to hand and power tools.

Total Credits 4

AVC 120 Introduction to Sealing

Course Information

Description This course provides an introduction to basic sealing principles; including tools, sealant selection, application processes and cleaning methods. Instruction is delivered using interactive online course content.

Total Credits 1

AVC 125 Bonding and Grounding

Course Information

Description	This course provides an overview of electrical bonding and grounding theory, required tools and procedures and final quality control. Students learn using interactive online content.
Total Credits	1

AVC 127 Aviation Assembly Core

Course Information

Description	This course provides students with the core knowledge necessary to be successful as an Aviation Sheetmetal Assembler. The topics will include safety, precision measurement, blueprint reading, sealing and electrical bonding techniques as well as quality control.
Total Credits	7

AVC 135 Hand Tools

Course Information

Description	This course provides an introduction to the various hand tools used in aerospace industry. The course also introduces the student to several aerospace fasteners including temporary fasteners, bolts, and lock bolts, Hi-Lok and rivets.
Total Credits	1

AVC 140 Electrical Bonding & Grounding

Course Information

Description	This course provides the specific technical and manufacturing skills and knowledge required to prepare electrical bonding and grounding locations in the aerospace industry. The topics are presented online using interactive content.
Total Credits	1

AVC 145 Power Island

Course Information

Description	This course provides the technical knowledge and skills necessary to operate power island equipment. Students are introduced to the equipment using interactive online course content.
Total Credits	1

AVC 150 Human Factors

Course Information

Description	This course provides students with an overview of the impact of human factors on the safe operation and maintenance of an aircraft. Topics will include a review of 12 most common human factors that can negatively impact the functioning of an aircraft and how to avoid these errors. Case studies will be used to help student apply what they learn to real world situations.
Total Credits	1

AVC 155 Aircraft Manufacturing Advanced Fastening Practices

Course Information

Description This course provides an overview of the knowledge and technical skills required for the installation of critical aviation structural fastener. These specific fasteners are required above and beyond the normal assembly and require specific techniques for installation.

Total Credits 1

AVC 160 Aircraft Control Surface Rigging

Course Information

Description This course provides an overview of the knowledge and technical skills required to perform maintenance procedures relevant to aircraft control surface rigging.

Total Credits 1

AVC 165 Technical Writing

Course Information

Description This course provides students with an overview of the process used to create effective technical documents. Topics include the three C's of good technical writing including clarity, conciseness and completeness, the five steps of creating successful technical documents, and the importance of accuracy.

Total Credits 1

AVC 170 Conflict Resolution

Course Information

Description This course provides the basics of good communication skills. Topics include the different views of conflict, types of listening skills and techniques for how to be an effective communicator; different conflict management styles such as positional bargaining, collaborative approach and the interest based relational approach.

Total Credits 1

BAF 103 Finance

Course Information

Description This course provides an introduction to financial markets, institutions and management in contemporary society. Emphasis is placed on developing an understanding of the financial markets in which funds are traded, the financial institutions participating in facilitating the trade of such funds and the financial principles and concepts behind sound financial management. Topics include financial systems of the United States, business financial management and financing other sectors of the economy.

Total Credits 3

Pre/Corequisites

Prerequisite ACC105 Fundamentals of Accounting
Prerequisite ECO105 Principles of Macroeconomics

BAF 105 Introduction to US Financial System

Course Information

Description This course emphasizes the relevance of monetary instruments, intermediaries and the role of the central banks as they impact local, state, national and international economics. Topics include history and evolution of financial institutions; monetary instruments and flow; and central banking, operation and policies.

Total Credits 3

BAF 121 Introduction to Bank Management

Course Information

Description	Emphasizes the relevance of banks and the economy, bank regulations and policy, bank organizational structure, bank management, the financial institutions' environment, bank deregulation, and asset/liability management.
Total Credits	3

Pre/Corequisites

Prerequisite	BAF103 Finance
Prerequisite	BAF105 Introduction to US Financial System

BIO 100 Biology Review

Course Information

Description	This course is designed to help the students increase their knowledge concerning basic biological concepts. It is not intended to replace BIO110 Principles of Biology. Recommended for students planning to take BIO150 Human Anatomy & Physiology or BIO160 Microbiology who have not had a recent life science course, or students wishing to prepare for BIO110 Principles of Biology. This course is graded on a pass/fail scale so students will not be receiving a grade. Students must score 70% of the available points to pass the class.
Total Credits	1

BIO 110 Principles of Biology

Course Information

Description	An introduction to fundamental biological concepts that includes molecular biology, cellular structure and function, human biology, and ecology. Students will have an understanding of the nature of science, levels of organization, bioenergetics, reproduction, inheritance, and the mechanisms of change. Laboratory stresses the process of scientific investigation and observation of biological processes.
Total Credits	5

BIO 120 Environmental Biology

Course Information

Description	An interdisciplinary study of the environment investigating how nature works and how things are interconnected. Based on an understanding of ecological concepts and principles, students examine lifestyle issues and critically analyze the relationship among population, natural resources, land use, agriculture, biodiversity, industrialization and pollution. Environmental problems are examined from scientific, ethical, economic and sociological perspectives to enable students to understand the relevance of biology to contemporary issues in human society.
Total Credits	3

BIO 125 Science Prospectus

Course Information

Description	An interdisciplinary study of how science influences all aspects of human life. Students will examine lifestyle issues and critically analyze the relationship among population, natural resources, land use, agriculture, biodiversity, industrialization and pollution and our role in these processes. Everything from food science to astronomy will be explored. Topics will be centered around problem solving and discussions using scientific data and critical thinking skills.
Total Credits	3

BIO 130 Biology I

Course Information

Description A study of the fundamental concepts in cellular and molecular biology, that lead to further studies in the diversity of life. Emphasis in lab is placed on the biological functions that define life, including basic biochemistry, cell and membrane functions, bioenergetics, reproduction and genetics, and phylogeny and evolution.

Total Credits 5

Pre/Corequisites

Prerequisite BIO 110 Principles of Biology

BIO 135 Biology II

Course Information

Description A study of the fundamental concepts of biology as they apply to levels of organization, from the bacteria through the vertebrates, and ecosystems. Lecture emphasis is on the organization, physiology, and diversity of life as studied through the kingdoms. Laboratory work emphasizes the structural comparison of major kingdoms and phyla.

Total Credits 5

Pre/Corequisites

Prerequisite BIO 130 Biology I

BIO 145 Human Anatomy & Physiology I

Course Information

Description This course represents the first of an eight (8) credit hour Anatomy & Physiology course and is designed to provide students with a thorough

study of the anatomy & physiology of the human body. The student is expected to enroll in the second half of the course (BIO 146 Human Anatomy & Physiology II) during the same academic year, and both courses (BIO 145 Human Anatomy & Physiology I and BIO 146 Human Anatomy & Physiology II) must be taken to be equivalent to BIO 150 Human Anatomy & Physiology. Lecture and lab studies will include: organization of the body; cells; tissues; membranes and glands; skeletal; muscular; nervous; sensory and endocrine system.

Total Credits 4

Pre/Corequisites

Prerequisite BIO 100 Biology Review Or

Prerequisite BIO 110 Principles of Biology

BIO 146 Human Anatomy & Physiology II

Course Information

Description This course represents the second of an eight (8) credit hour Anatomy and Physiology course and is designed to provide students with a thorough study of the anatomy and physiology of the human body. The student is expected to enroll in the first half of the course (BIO 145 Human Anatomy & Physiology I) during the same academic year, and both courses BIO 145 Human Anatomy & Physiology I and BIO 146 Human Anatomy & Physiology II must be taken to be equivalent to BIO 150 Human Anatomy & Physiology. Lecture and lab studies will include; the cardiovascular system, lymphatic system, respiratory system, digestive system, metabolism, urinary system, electrolyte and acid-base balance and reproductive systems.

Total Credits 4

Pre/Corequisites

Prerequisite BIO 145 Human Anatomy & Physiology I

BIO 150 Human Anatomy & Physiology

Course Information

Description	A detailed study of the structure and function of the human body. Laboratory work includes tissue examination, basic physiological experiments and structural identification of all organ systems.
Total Credits	5

BIO 151 Anatomy & Physiology Enhancement

Course Information

Description	This course provides for an elaboration of either the anatomy or the physiology of foundation topics presented in BIO150 Human Anatomy and Physiology. Topics can include cell structure and function, muscular system, nervous system, endocrine system, immune system, cardiovascular system, respiratory system, digestive systems and/or urogenital system. This course is graded on a pass/fail scale and no letter grade will be given. Passing credit will be awarded when the student satisfactorily completes a minimum of 75% of the content assigned for this course. Note: Core content may vary by semester as dictated by student learning assessments. Additional topic lists may be distributed each semester as instructors are not restricted from adding topics for enrichment.
Total Credits	1

Pre/Corequisites

Prerequisite	BIO150 Human Anatomy and Physiology
--------------	-------------------------------------

BIO 160 Microbiology

Course Information

Description	An introduction to microorganisms and their morphology, physiology, genetics and distribution. Emphasis is placed on the relationship of microorganisms to disease and the human immune responses. Techniques involving staining, culturing, identifying and biochemistry are considered in laboratory.
Total Credits	5

Pre/Corequisites

Prerequisite	BIO 110 Principles of Biology
Prerequisite	BIO 100 Biology Review

BMT 101 Optimize Your Website-Beginning Search Engine Optimization (SEO)

Course Information

Description	This purpose of this workshop is to provide an understanding of how search engine optimization techniques can be used to improve a website and increase its traffic. Emphasis will be on understanding how search engines work, the SEO process, tools and techniques on how you can optimize your website
Total Credits	1

BMT 105 Online Advertising-Beginning Google Ad Words

Course Information

Description	This purpose of this workshop is to provide an understanding of how to plan and create a successful online advertising campaign using Google AdWords. Emphasis will be on understanding how the AdWords system works, how campaigns should be structured, and how keyword lists and ads are developed. We also introduce Google Analytics and conversion tracking and explain the billing cycle.
Total Credits	1

Pre/Corequisites

Prerequisite	BMT101 Optimize Your Website Beginning Search Engine Optimization (SEO)
--------------	---

BMT 110 Blogging For Your Business

Course Information

Description	This workshop will provide an understanding of how to plan and create a successful blogging campaign. Promoting your business by delivering marketing messages in the form of a blog can help attract and retain customers. Blogging can be part of an online marketing campaign, which is a critical skill for today's business owner and business student.
Total Credits	1

BMT 115 Beginning Email Marketing

Course Information

Description	This workshop will provide an understanding of how to plan an email marketing campaign. We will examine best practices for sending email messages; discuss deliverability, tracking, list building and can-spam compliance issues.
Total Credits	1

BMT 120 Social Media Madness

Course Information

Description	This workshop will provide an understanding of what Social Media is and how it can be used in marketing your business. We will examine ways to engage social media to promote a product, brand or identity.
Total Credits	1

BUS 104 Introduction to Business

Course Information

Description	Studies various types of business organizations and the relationships of business to government and management to labor. Management's perspective of production, marketing, personnel, finance and transportation is a constant consideration.
Total Credits	3

BUS 106 Office Procedures

Course Information

Description	Prepares students to handle situations in an office setting. Students learn office management skills including communication, and organization skills.
Total Credits	3

BUS 121 Business Communications

Course Information

Description	Business Communications is designed to cover the communication skills that are necessary in a high technology global business environment. These skills include competencies in written and oral communication; an awareness of international, legal, and ethical issues; the ability to work collaboratively on group projects; and proficiency in using microcomputers.
Total Credits	3

BUS 125 Business Law

Course Information

Description	A basic introductory law course covering the legal and social environment within which business operates, including the structure, processes and procedures of the American legal system. A substantial portion of the course is devoted to contracts.
--------------------	--

Total Credits 3

BUS 130 Personal Finance

Course Information

Description This course is designed for non-business majors as well as for business majors. The course is concerned with efficient management of money as a primary requirement for successful personal life. Aids individuals in establishing and maintaining credit, using a budget, safeguarding and investing savings and arranging personal insurance.

Total Credits 3

BUS 135 Introduction to Public Relations

Course Information

Description In this course students will learn the theories that are the backbone of all public relations practitioners while also learning the roles and responsibilities of those who practice in the field. Students will explore the issues and challenges facing public relations practitioners in today's technological, multicultural and global environment. Students will put their knowledge to the test by creating and presenting a public relations plan.

Total Credits 3

BUS 137 Introduction to QuickBooks

Course Information

Description This course introduces students to the fundamental concepts and operations necessary to use QuickBooks. Emphasis is placed on basic functions and familiarity with the QuickBooks software. Topics include: Introduction to basic accounting concepts, introduction to

QuickBooks concepts, working with customers and vendors, performing banking tasks, and creating and maintaining computer files.

Total Credits 3

BUS 140 Principles of Marketing

Course Information

Description Production and marketing of goods and services are the essence of economic life in any society. All organizations perform these two basic functions to satisfy their commitments to society, their customers and their owners. Marketing examines the problems of transferring title and moving goods from producer to consumer, buying, selling, storing, transporting, standardizing, financing, risk-bearing and supplying market information. The free enterprise and the government's contribution, retailing and international marketing are discussed at length.

Total Credits 3

BUS 145 Dreamweaver

Course Information

Description This course is designed to introduce the fundamentals of web page authoring using Macromedia Dreamweaver version 8. Emphasis is on developing an understanding of how to plan, design, create, modify and publish a web site.

Total Credits 3

BUS 160 Human Relations

Course Information

Description	This course is designed to help employees and supervisors gain human relations skills needed for success at their work site. The case method will be used to analyze situations in which actual job relations are presented.
Total Credits	3

BUS 180 Business Internship

Course Information

Description	The internship represents an educational strategy linking the classroom with the acquisition of knowledge in the workplace. Through direct observation, reflection and evaluation, students gain an insight into the internship site's work, mission, and audience, how these relate to their academic study, as well as the organization's position in the broader industry or field. Students will produce a critical reflection on their internship experience demonstrating how they have addressed specific learning goals.
Total Credits	3

BUS 200 Principles of Management

Course Information

Description	Explores the basic management functions of planning, controlling organizing and directing an organization. The basic management theories, functions and aspects of various types of business are studied.
Total Credits	3

CAT 101 CATIA Part Design & Sketcher

Course Information

Description This course provides an introduction to the 3D EXPERIENCE platform, including searching, creating and editing objects. This course covers the creation of solid parts without complex contours. Students will be introduced to the part environment of 3D EXPERIENCE and learn how to work between the Sketcher and Part Design workbenches to create individual parts.

Total Credits 4

Pre/Corequisites

Prerequisite MCD 104 Blueprint Reading for Drafters or MMG 113 Print Reading or equivalent

CAT 102 CATIA Drafting

Course Information

Description This course covers the creation of engineering drawings. Students will be introduced to the drafting environment of 3DExperience and learn how to create drawings from parts and products.

Total Credits 4

Pre/Corequisites

Prerequisite CAT 101 CATIA Part Design & Sketcher

CAT 103 CATIA Functional Tolerancing & Annotation

Course Information

Description This course is for those interested in model based definition, where the 3D model is the master instead of the draft sheet. This course covers all of the necessary options to properly apply tolerancing and annotations on the 3D part or product.

Total Credits 4

Pre/Corequisites

Prerequisite CAT 101 CATIA Parts Design & Sketcher

CAT 105 CATIA Assembly Design

Course Information

Description This course covers the use of multiple parts to create an assembly. This includes manipulating parts in an assembly, creating engineering connections and analyzing assemblies. It also covers designing within the context of an assembly, including creating and using publications.

Total Credits 4

Pre/Corequisites

Prerequisite CAT 101 CATIA Part Design & Sketcher

CAT 110 CATIA Wireframe & Surfaces

Course Information

Description This course is an extension of the part environment which covers the use of wireframe and surface geometry to create complex contours. This course concentrates on the tools available and how to integrate this geometry back into a solid part.

Total Credits 4

Pre/Corequisites

Prerequisite CAT 101 CATIA Part Design & Sketcher

CAT 115 CATIA Prismatic Machining

Course Information

Description This course is the beginning manufacturing course. This course covers the machining operations involved in 3-axis milling. Students will be introduced to the process environment of CATIA V5 and learn how to work between the process, part and product environments.

Total Credits 4

Pre/Corequisites

Prerequisite	CAT 101 CATIA Part Design & Sketcher
Prerequisite	CAT 105 CATIA Assembly Design

CAT 120 CATIA ENOVIA LCA

Course Information

Description	This course provides students with a thorough background in the Enterprise Innovation via Life Cycle Applications. Student will learn to utilize the ENOVIA system to manage a product from initial conceptual drawings, through 3D modeling, to retirement of the product.
--------------------	---

Total Credits 3

Pre/Corequisites

Prerequisite	CAT 101 CATIA Part Design & Sketcher
Prerequisite	CAT 105 CATIA Assembly Design

CAT 122 CATIA ENOVIA DMU

Course Information

Description	This course is intended for students who want to learn to view and analyze CAD data. Students are introduced to the product environment and the 2D viewer environment. Topics include various analytical and navigational tools and functional dimensioning and tolerancing information available within ENOVIA DMU
--------------------	---

Total Credits 2

CAT 124 CATIA Surface Machining

Course Information

Description	This course is a continuation in the manufacturing environment. This course covers the more advanced machining operations involved in full 3-axis and multi-axis machining. Students will learn how to integrate the manufacturing tools available in Prismatic Machining and Mill-Turn Machining.
Total Credits	3

Pre/Corequisites

Prerequisite	CAT 101 CATIA Part Design & Sketcher
Prerequisite	CAT 105 CATIA Assembly Design
Prerequisite	CAT 115 CATIA Prismatic Machining

CCP 100 Introductory Craft Skills

Course Information

Description	This course is the Core Curriculum for Introductory Craft Skills under the National Center for Construction Education (NCCER). This course is NCCER's basic course for all construction, maintenance and pipeline occupations. This course covers basic safety obligations of workers, supervisors and managers; reviews the role of company policies and OSHA regulations; introduces trainees to hand and power tools widely used in the construction industry, and their proper uses. Students will also become familiarized with basic blueprint terms, components and symbols
Total Credits	3

Pre/Corequisites

Prerequisite	SAF 101 Safety Orientation/OSHA 10
--------------	------------------------------------

CCP 105 Carpentry Basics

Course Information

Description	This course covers eight topics and starts by introducing the carpentry trade, including history, career opportunities, and requirements. The course
--------------------	--

includes study and practice required for framing a simple structure. Specific topics are building materials, fasteners and adhesives, hand and power tools, reading plans & elevations, floor systems, wall and ceiling framing, roof framing and windows and exterior doors.

Total Credits 4

Pre/Corequisites

Prerequisite CCP 100 Introductory Craft Skills

CCP 110 Floors, Walls, & Ceiling Framing

Course Information

Description This course covers framing basics as well as the procedures for laying-out and constructing a wood floor using common lumber as well as engineered building materials. This course also covers the procedures for laying-out and framing walls and ceilings, including roughing-in doors and window openings, construction corners and partition Ts, bracing walls and ceilings, and applying sheathing.

Total Credits 4

Pre/Corequisites

Prerequisite CCP 105 Carpentry Basics

CCP 115 Roof Framing

Course Information

Description This course covers the various kinds of roofs and instruction for laying out rafters for gable roof, hip roof, and valley intersections. Coverage includes both stick built and truss built roofs.

Total Credits 3

Pre/Corequisites

Prerequisite CCP 110 Floors, Walls & Ceiling Framing

CCP 120 Windows, Doors, & Stairs

Course Information

Description This course describes the various types of windows, skylights, and exterior doors, and provides instruction for installing them. It also includes instruction for installing weather-stripping and locksets. The course introduces the trainee to the various types of stairs and the common building code requirements related to stairs. The course focuses on the techniques for measuring and calculating rise, run and stairwell openings, laying out stringers, and fabricating basic stairways.

Total Credits 3

Pre/Corequisites

Prerequisite CCP 115 Roof Framing

CCP 125 Commercial Drawings

Course Information

Description This course is the curriculum for Commercial Drawings under the National Center for Construction Education (NCCER). This course covers the types and uses of drawings prepared for commercial structures. It provides information about the format and content of commercial drawings and their use in conveying specific construction requirements. It describes the standard format for specifications.

Total Credits 2

Pre/Corequisites

Prerequisite CCP 115 Roof Framing

CCP 130 Roofing Applications

Course Information

Description This course is the curriculum for Roofing Applications under the National Center for Construction Education (NCCER). This course covers the common materials used in residential and light commercial roofing, along with the safety practices and application methods for these materials. It includes shingles, roll roofing, shakes, tiles, and metal and membrane roofs, as well as the selection and installation of roof vents.

Total Credits 1

Pre/Corequisites

Prerequisite CCP 125 Commercial Drawing

CCP 135 Thermal and Moisture Protection

Course Information

Description This course is the curriculum for Thermal and Moisture Protection under the National Center for Construction Education (NCCER). This course covers the selection and installation of various types of insulating materials in walls, floors, and attics. It also covers the uses and installation practices for vapor barriers and weatherproofing materials.

Total Credits 1

Pre/Corequisites

Prerequisite CCP 130 Roofing Applications

CCP 140 Exterior Finishing

Course Information

Description This course is the curriculum for Exterior Finishing under the National Center for Construction Education (NCCER). This course covers the various types of exterior siding used in residential construction including wood, metal, vinyl, and cement board siding, and their installation procedures.

Total Credits 2

Pre/Corequisites

Prerequisite CCP 135 Thermal & Moisture Protection

CCP 145 Cold-Formed Steel Framing

Course Information

Description This course is the curriculum for Cold-Formed Steel Framing under the National Center for Construction Education (NCCER). This course covers the types and grades of steel framing materials and includes instructions for selecting and installing metal framing for interior walls, exterior walls, and partitions.

Total Credits 1

Pre/Corequisites

Prerequisite CCP 140 Exterior Finishing

CCP 147 Carpentry Blue Print Reading

Course Information

Description This course is designed to give students knowledge of blueprint reading as it relates to the construction industry. This course gives instruction in reading floor plans and elevation drawings, symbols and notations, scaling and dimensioning practices, materials of construction; reading blueprint, electrical and mechanical trades blueprints; reading detail drawings, plot plans and specifications; timber, steel, concrete and concrete reinforcement.

Total Credits 2

CCP 150 Drywall Installation and Finishing

Course Information

Description This course is the curriculum for Drywall Installation and Finishing under the National Center for Construction Education (NCCER). This course covers the various types of gypsum drywall, their uses, and the fastening devices and methods used to install them. The materials, tools, and methods used to finish and patch gypsum drywall. It includes coverage of both automatic and manual taping and finishing methods. It also contains detailed instructions for installing drywall on walls and ceilings, using nails, drywall screws, and adhesives. It also covers fire- and sound-rated walls.

Total Credits 2

Pre/Corequisites

Prerequisite CCP 145 Cold-Formed Steel Framing

CCP 153 Carpentry Technical Drafting

Course Information

Description This course includes instruction in sketching and lettering, use of drafting equipment common to the construction industry. Includes drawing geometric shapes, multi-views, basics of isometrics, architectural elevations and floorplans to scale.

Total Credits 1

CCP 155 Doors and Door Hardware

Course Information

Description This course is the curriculum for Doors and Door Hardware under the National Center for Construction Education (NCCER). This course covers the installation of metal doors and related hardware in steel-framed, wood-framed, and masonry walls, along with their related hardware, such as locksets and door closers. It also covers the installation of wooden doors, folding doors, and pocket doors. rated walls.

Total Credits 1

Pre/Corequisites

Prerequisite CCP 150 Drywall Installation & Finishing

CCP 170 Suspended Ceilings

Course Information

Description This course is the curriculum for Suspended Ceilings under the National Center for Construction Education (NCCER). This course covers the materials, layout, and installation procedures for many types of suspended ceilings used in commercial construction, as well as ceiling tiles, drywall suspension systems, and pan-type ceilings.

Total Credits 1

Pre/Corequisites

Prerequisite CCP 155 Doors & Door Hardware

CCP 175 Window, Door, Floor, and Ceiling Trim

Course Information

Description This course is the curriculum for Window, Door, Floor, and Ceiling Trim under the National Center for Construction Education (NCCER). This course covers the different types of trim used in finish work. It focuses on the proper methods for selecting, cutting, and fastening trim to provide a professional finished appearance.

Total Credits 1

Pre/Corequisites

Prerequisite CCP 170 Suspended Ceilings

CCP 180 Cabinet Installation

Course Information

Description This course is the curriculum for Cabinet Installation under the National Center for Construction Education (NCCER). This course covers the selection and installation of base and wall cabinets and countertops.

Total Credits 1

Pre/Corequisites

Prerequisite CCP 175 Window, Door, Floor and Ceiling Trim

CCP 185 Carpentry Internship I

Course Information

Description In this course students will have the opportunity to link classroom/ lab theory with an experimental learning opportunity. Through direct observation, reflection and evaluation, students gain an understanding of the internship site's work, mission, and customers. The student will identify how these relate to their program of study, as well as the organization's position in the broader industry or field. Students will produce a critical reflection of their internship experience demonstrating how they have addressed specific learning goals.

Total Credits 3

Pre/Corequisites

Prerequisite CCP 180 Cabinet Installation

CCP 187 Carpentry Internship II

Course Information

Description This course is a continuation of Carpentry Internship I in which students continue their work in experiential learning. Through observation, reflection and evaluation, students gain an understanding of the internship site's work, mission, and customers. The student

will identify how these relate to their program of study, as well as the organization's position in the broader industry or field. Students will produce a critical reflection of their internship experience, demonstrating how they have addressed specific learning goals.

Total Credits 3

Pre/Corequisites

Prerequisite CCP 180 Cabinet Installation
Prerequisite CCP 185 Carpentry Internship I

CED 101 Computer Essentials

Course Information

Description This course is designed to develop students' computer literacy, keyboarding skills and to meet the needs of students in the associate degree programs and technical certificate programs. The student will learn from hands-on experiences basic skills in file management utilities, word processing, spreadsheets, and graphical presentations in the Windows environment.

Total Credits 2

CED 102 Keyboarding

Course Information

Description This course is designed to develop utilization of the touch system of keyboarding on the standard keyboard and manipulation of the operative parts of the keyboard. Emphasis will be on accuracy with speed.

Total Credits 1

CED 108 Word Processing

Course Information

Description	Emphasizes an intensive use of word processing software to create and revise business documents. Topics include: equipment and supplies maintenance and usage, work area management, word processing software, and productivity.
Total Credits	3

CED 115 Computer Applications

Course Information

Description	This course introduces students to the fundamental concepts and operations necessary to use computers. Emphasis is placed on basic functions and familiarity with computer use. Topics include: computer terminology, introduction to the windows environment, introduction to networking, introduction to word processing, introduction to spreadsheets, and introduction to databases.
Total Credits	3

CED 116 Advanced Word

Course Information

Description	Upon completion of this course students should understand the basic concepts of Word, perform character and paragraph formatting, manage text flow, create and modify tables, work with headers and footers, use illustrations and graphics, create and proof documents, create references and hyperlinks, and perform mail merges.
Total Credits	2

Pre/Corequisites

Prerequisite	CED 115 Computer Applications
--------------	-------------------------------

CED 117 Advanced Excel

Course Information

Description	Upon completion of this course students should understand the basic concepts of Excel, be able to format cells, ranges, and worksheets, work with data, use basic and advanced formulas and functions, create and modify charts, insert pictures and shapes to a worksheet.
Total Credits	2

Pre/Corequisites

Prerequisite	CED 115 Computer Applications
--------------	-------------------------------

CED 118 Advanced PowerPoint

Course Information

Description	Upon completion of this course students should understand the basic essentials of PowerPoint, insert and modify text on slides, add tables, graphics, and video to presentations, use transitions and animations, secure and share a presentation. Students should be able to create and present a PowerPoint presentation.
Total Credits	2

Pre/Corequisites

Prerequisite	CED 115 Computer Applications
--------------	-------------------------------

CED 120 Advanced Computer Applications

Course Information

Description	This course enhances computer literacy and meets the needs of students in associate degree and/or certificate programs. The students will learn from hands-on experiences, advanced skills in word processing, spreadsheet applications, and graphical presentations in the Windows environment.
Total Credits	3

Pre/Corequisites

Prerequisite CED 115 Computer Applications

CED 130 Introduction to Google Documents

Course Information

Description This course will introduce students to the fundamental concepts and usage of Google Drive and its suite of tools. Topics will include the creation and editing of documents, spreadsheets, and presentations.

Total Credits 2

CED 135 Introduction to Publisher

Course Information

Description This course provides a study of desktop publishing using Microsoft Publisher. Development of presentation graphics concepts and troubleshooting applications is integral to the course.

Total Credits 2

CED 140 Introduction to Social Media and Personal Branding

Course Information

Description Students will learn how to use social media platforms to stay in touch with colleagues, promote their business and keep up with news. Students will learn how to build their own personal brand and use the social media platforms to promote themselves.

Total Credits 2

CED 145 Microsoft Outlook/OneDrive/OneNote

Course Information

Description This course will introduce students to the fundamental concepts and usage of Microsoft OneDrive, Outlook, and OneNote. Students will learn the concepts of email, file storage and organization of electronic files.

Total Credits 1

Pre/Corequisites

Prerequisite CED 115 Computer Applications

CED 150 Introduction to Adobe Acrobat

Course Information

Description This course will introduce students to the fundamental concepts and usages of Adobe Acrobat.

Total Credits 1

Pre/Corequisites

Prerequisite CED 115 Computer Applications

CED 155 Introduction to Coding

Course Information

Description This course introduces students to basic coding principles. Throughout the course students are introduced to coding structures, algorithms, syntax, functions, critical thinking and troubleshooting, plus other coding language basics. At the end of the course students will develop an app or game that will run on a computer. This course does not require any prior knowledge of coding.

Total Credits 2

Pre/Corequisites

Prerequisite CED 115 Computer Applications

CED 170 Applied Learning Internship I

Course Information

Description The applied learning internship represents an educational strategy linking the classroom with the acquisition of knowledge in the workplace. Through direct observation, reflection and evaluation, students gain an insight into the internships site's work, mission, and audience, how these relate to their academic study, as well as the organization's position in the broader industry or field. Students will produce a critical reflection on their internship experience demonstrating how they have addressed specific learning goals.

Total Credits 1

Pre/Corequisites

Prerequisite CED 115 Computer Applications

Prerequisite CED 102 keyboarding

Prerequisite BUS 106 Office Procedures

CED 175 Applied Learning Internship II

Course Information

Description The applied learning internship represents an educational strategy linking the classroom with the acquisition of knowledge in the workplace. Through direct observation, reflection and evaluation, students gain an insight into the internships site's work, mission, and audience, how these relate to their academic study, as well as the organization's position in the broader industry or field. Students will produce a critical reflection on their internship experience demonstrating how they have addressed specific learning goals.

Total Credits 1

Pre/Corequisites

Prerequisite CED 170 Applied Learning Internship I

CED 180 Applied Learning Internship III

Course Information

Description The applied learning internship represents an educational strategy linking the classroom with the acquisition of knowledge in the workplace. Through direct observation, reflection and evaluation, students gain an insight into the internships site's work, mission, and audience, how these relate to their academic study, as well as the organization's position in the broader industry or field. Students will produce a critical reflection on their internship experience demonstrating how they have addressed specific learning goals.

Total Credits 1

Pre/Corequisites

Prerequisite CED 175 Applied Learning Internship II

CFT 101 Introduction to Composites

Course Information

Description This course provides students with the fundamentals of composite theory in an interactive on line environment. Students then apply the concepts to industry based projects in a 3D interactive online environment and a world class composite laboratory. Topics include the materials, equipment, processes, components and design of polymer composite structures.

Total Credits 2

Pre/Corequisites

Prerequisite AVC 110 OSHA/Safety

Prerequisite	MTH 020 Math Fundamentals
Prerequisite	AVC 102 Precision Instruments

CFT 106 Composite Finish Trim

Course Information

Description	This course provides students with an understanding of the processes and procedures use to finish trim composites parts. Topics include safety, documentation, tools, procedures and inspection.
Total Credits	2

Pre/Corequisites

Prerequisite	CFT 101 Introduction to Composites
Prerequisite	CFT 130 Composite Fabrication Methods/Application
Prerequisite	AVC 110 Safety/OSHA 10 AY 2014-15

CFT 107 Composite Assembly

Course Information

Description	Composite Assembly teaches the fundamentals of joining composite structures. Adhesive bonding as well as mechanical fasteners are covered. Safe procedures are emphasized. Hole preparation for mechanical fasteners and surface preparation for adhesive bondings are essential elements of this course. The course consists of theory and practical application through hands on projects.
Total Credits	2

Pre/Corequisites

Prerequisite	CFT 106 Composite Finish Trim
--------------	-------------------------------

CFT 130 Composite Fabrication Methods /Applications

Course Information

Description Fundamentals of composite structure fabrication methods and applications will be covered including, hand lay-up, bonding, vacuum bagging and resin transfer molding. Emphasis will also be placed on composites safety and inspection/testing of composite components.

Total Credits 2

Pre/Corequisites

Prerequisite AVC 112 Blue Print Reading AY 2014-15

Prerequisite CFT 101 Introduction to Composites

CFT 135 Overview of Composite Inspection

Course Information

Description This course is designed to provide students with an understanding of the inspection process during repair procedures. Students will learn the role of repair technicians in the inspection process. Emphasis will be placed on the importance of documentation in the inspection of repair. This course is an online course and utilizes interactive online content.

Total Credits 1

CFT 140 Composite Inspection

Course Information

Description This course is designed to provide students with an understanding of the inspection process during repair procedures. Students will learn the role of repair technicians in the inspection process while obtaining hands on experience in basic NDI testing techniques. Emphasis will be placed on the

importance of documentation in the inspection of repair. This course utilizes online, classroom and laboratory learning environments.

Total Credits 2

Pre/Corequisites

Prerequisite	AVC 112 Blueprint Reading
Prerequisite	AVC 110 Safety/OSHA 10
Prerequisite	CFT 101 Introduction to Composites
Prerequisite	CFT 106 Composites Finish Trim
Prerequisite	CFT 107 Composite Assembly
Prerequisite	CFT 130 Composite Fabrication Methods/Application

CFT 141 Disassemble & Damage Removal Techniques

Course Information

Description	This course provides student with the knowledge required to safely and effectively prepare a part for repair. In the lab setting students will learn to effectively remove finish, disassemble and remove damage composite material. Special attention will be paid to developing the student's tactile skills in all these areas. Theory in this course is taught using an interactive on line environment.
--------------------	--

Total Credits 3

Pre/Corequisites

Prerequisite	AVC 110 Safety/OSHA 10
Corequisite	CFT 140 Composite Inspection
Prerequisite	AVC 112 Blueprint Reading
Prerequisite	CFT 101 Introduction to Composites
Prerequisite	CFT 106 Composite Finish Trim
Prerequisite	CFT 107 Composite Assembly
Prerequisite	CFT 130 Composite Fabrication Methods/Applications

CFT 142 Composite Repair

Course Information

Description This course is designed to provide students with the knowledge and techniques used for structural repair of aircraft made with composite materials. Students will complete multiple industry based projects designed to challenge their skills with both wet layup and pre preg materials.

Total Credits 4

Pre/Corequisites

Prerequisite CFT 141 Disassembly and Damage Removal Techniques

CFT 143 Complex Composite Repairs

Course Information

Description This course is designed to provide the student with hands on experience working with non- structural composite repairs. Instruction will include learning to solve problems presented in non- production atmospheres in relation to composite repairs. Students will also review case studies and problem solving models.

Total Credits 3

Pre/Corequisites

Prerequisite CFT 144 Electrical Bonding Repair

CFT 144 Electrical Bonding Repair

Course Information

Description This course will provide students with the knowledge and skills used in electrical bonding composite repair. Students will learn both theory and application using secondary bonding techniques.

Total Credits 1

Pre/Corequisites

Prerequisite CFT 142 Composite Repair

CHM 110 General Chemistry

Course Information

Description An introduction to chemistry that includes the study of matter, atoms, molecules, chemical arithmetic, chemical reactions, gas laws, acids and bases, organic chemistry and laboratory experimentation.

Total Credits 5

Pre/Corequisites

Prerequisite MTH 020 Math Fundamentals

CHM 125 Chemistry I

Course Information

Description An introduction to inorganic chemistry with emphasis on atomic structure, molecular bonding and structure, the periodic table, kinetic theory, changes of state, solutions and concentrations, chemical reactions and oxidation-reduction and fundamental organic chemistry. Includes laboratory experimentation.

Total Credits 5

Pre/Corequisites

Prerequisite CHM 110 General Chemistry

Prerequisite MTH 101 Intermediate Algebra

Corequisite MTH 112 College Algebra

CHM 135 Chemistry II

Course Information

Description	A continuation of CHM 125 Chemistry I. A presentation of the properties of solutions, chemical kinetics, equilibrium, acid-base theory, thermodynamics, coordination chemistry, organic and biochemistry and electrochemistry. Includes laboratory experimentation.
Total Credits	5

CRJ 101 Introduction to Criminal Justice

Course Information

Description	Provides an introduction to the historical development and the internal and external issues of the various components of the criminal justice system including police, corrections and the courts. The student will illustrate how these interrelated components result in the administration of justice today.
Total Credits	3

CRJ 105 Criminal Investigation

Course Information

Description	Explores issues including the effective interview and interrogation techniques, crime scene management and lab processes, crime scene documentation methods, case preparation and court presentation.
Total Credits	3

Pre/Corequisites

Prerequisite	CRJ 101 Introduction to Criminal Justice
Prerequisite	CRJ 110 Criminal Law

CRJ 110 Criminal Law

Course Information

Description	Examines the history, scope and nature of law. It focuses on the parties to a crime; classification of offenses; criminal acts and intent; the capacity to commit crime; and criminal defenses. It will cover the elements of misdemeanor and felony crimes.
Total Credits	3

CRJ 115 Agency Administration

Course Information

Description	Conducts a practical analysis of modern administration theory and supervisory, management principles and their application to the unique operating problems of criminal justice organizations.
Total Credits	3

CRJ 120 Juvenile Delinquency and Justice

Course Information

Description	Examines the historical precedents and philosophical reasons for treating juveniles differently from adults. Reviews empirical evidence about child development that can illuminate the reasons for their special status within the system. It will study the major theories that have been proposed as explanations of delinquent behavior. The course will also provide a detailed overview of the juvenile justice system, from its beginnings to the current state of the institution.
Total Credits	3

CRJ 125 Law Enforcement Operations and Procedures

Course Information

Description	Examines the role of police in society and the application of key concepts to policing scenarios. Students identify, discuss and assess critical police practices and processes to include deployment, arrest procedures, search strategies and other operational considerations.
Total Credits	3

Pre/Corequisites

Prerequisite	CRJ 101 Introduction to Criminal Justice
Prerequisite	CRJ 110 Criminal Law

CRJ 130 Criminal Procedures

Course Information

Description	Introduces basic court system procedures and the jurisdiction of the courts. It also focuses on the constitutional and other legal requirements that affect law enforcement practices and procedures. Specific topics include confessions and interrogations, identification procedures, arrest, search and seizure, and admissibility of evidence.
Total Credits	3

CRJ 135 Criminal Justice Interview and Report Writing

Course Information

Description	Focuses on the unique types of writing required in a criminal justice career. Students are required to gather pertinent information and then record that information by writing a variety of report narratives representative of those prepared by individuals working in a profession within the criminal justice system.
Total Credits	3

CRJ 140 Professional Responsibility in Criminal Justice

Course Information

Description	Explores the major components involved in the study of ethics, particularly as it applies to the field of criminal justice. Focus is placed on the code of conduct and ethics of the criminal justice profession and the standards held to in their professional role. The aim of the course is to produce professionals who are not only critical thinkers, but who have the skills necessary to pursue sound ethics in their day-to-day decisions and activities.
Total Credits	3

CRJ 145 Corrections

Course Information

Description	This course provides an introduction into the history of corrections, philosophical background, processes, institutions, parole, probation and offender reentry. Correctional theories and the relationship with other facets of the criminal justice system are examined.
Total Credits	3

CRJ 155 Policing Diverse Cultures

Course Information

Description	This course examines the challenges and opportunities law enforcement faces providing public safety services in culturally diverse communities. The influences of culture, ethnicity, race, sexual orientation, and socioeconomic class will also be discussed.
--------------------	---

Total Credits 3

Pre/Corequisites

Prerequisite CRJ 101 Introduction to Criminal Justice

CRJ 161 Internship in Criminal Justice I

Course Information

Description The purpose of the internship program is to allow student an opportunity to gain knowledge and experience in private security and public safety services and further explore careers in the field with a focus on private policing.

Total Credits 1

Pre/Corequisites

Prerequisite CRJ 101 Introduction to Criminal Justice

Prerequisite CRJ 125 Law Enforcement Operations & Procedures

Prerequisite CRJ 135 Criminal Justice Interview & Report Writing

Prerequisite CRJ 140 Professional Responsibility in Criminal Justice

CRJ 162 Internship in Criminal Justice II

Course Information

Description The purpose of the internship program is to allow students an opportunity to gain knowledge and experience in security/law enforcement and public safety services and further explore careers in the field with a focus on private policing/urban policing.

Total Credits 1

Pre/Corequisites

Prerequisite CRJ 161 Internship in Criminal Justice I

CRJ 163 Internship in Criminal Justice III

Course Information

Description The purpose of the internship program is to allow students an opportunity gain knowledge and experience in law enforcement and public safety services and further explore careers in the field with a focus on urban policing.

Total Credits 1

Pre/Corequisites

Prerequisite CRJ 162 Internship in Criminal Justice II

CRJ 180 KLETC or Equivalent Law Enforcement Academy Training

Course Information

Description This course provides credit for the training required for certified law enforcement officers in the state of Kansas. This credit is awarded through the completion of the Kansas Law Enforcement Training Center or other appropriate Law Enforcement Academy.

Total Credits 12

CTS 107 Fundamentals for Aerospace Manufacturing

Course Information

Description This course provides an overview of the materials and processes used in manufacturing high performance, lightweight, and reliable structures for aerospace products. Emphasis is placed on process evaluation techniques that can be extrapolated to other system areas such as new products and new technology. Instruction will take place using an interactive on line environment.

Total Credits 1

CTS 112 Blueprint Reading

Course Information

Description This course is an introduction to reading and interpreting blueprints. Topics include blueprint views, lines, dimensions and tolerances and blueprint symbols. Working in an interactive online environment students' learn a systematic approach to reading blueprints.

Total Credits 2

CTS 120 Introduction to Sealing

Course Information

Description This course provides an introduction to basic sealing principles; including tools, sealant selection, application processes and cleaning methods. Instruction is delivered using interactive online course content.

Total Credits 1

CTS 135 Hand Tools

Course Information

Description This course provides an introduction to the various hand tools used in aerospace industry. The course also introduces the student to several aerospace fasteners including temporary fasteners, bolts, and lock bolts, Hi-Lok and rivets.

Total Credits 1

CTS 140 Composites Structural Assembly

Course Information

Description The course is designed to familiarize students in the basic drilling and fastener installations that are particular to the 787 program. This course will include Drilling Basics with an emphasis on drilling holes in aluminum/composite, composite/ aluminum and composite/steel stack-ups to engineering requirements in a classroom format with extensive hands-on practice included. Basic Safety and Ergonomics will be included.

Total Credits 2

Pre/Corequisites

Prerequisite CTS 107 Fundamentals For Aerospace Manufacturing
Prerequisite CTS 135 Hand Tools
Prerequisite CTS 112 Blueprint Reading
Prerequisite CTS 120 Introduction To Sealing

CTS 215 Assembly Mechanic Business and Industry

Course Information

Description This course is designed to provide the student with a general overview of assembly techniques used in aviation. Working in a hands-on setting, students will learn the basics of aircraft assembly while focusing on inspection techniques. Students learn in an environment which combines interactive online delivery of theoretical content with hands on application in a state of the art assembly laboratory.

Total Credits 3

Pre/Corequisites

Prerequisite CTS 107 Fundamentals For Aerospace Manufacturing
Prerequisite CTS 135 Hand Tools
Prerequisite CTS 112 Blueprint Reading
Prerequisite CTS 120 Introduction to Sealing

CNU 010 Certified Nurse Aide Update

Course Information

Description This course is for students who originally certified as a Nursing Assistant in the State of Kansas and have not worked in a Health Care Setting for two or more years. This class will prepare students to return to the Health Care Setting under the direct supervision of a licensed nurse as a Certified Nurse Assistant.

Total Credits 1

Pre/Corequisites

Prerequisite GRA 101 Certified Nurse Aide

CPR 001 CPR for Healthcare Providers

Course Information

Description Designed for practitioners whose primary work environment is in a clinical setting or those providing direct patient care. This is the most comprehensive credential, and it is often a prerequisite for advanced training courses. Suggested participants include: physicians, dentists, nurses, paramedics, EMTs, respiratory therapists, pharmacists, medical or nursing assistants and other allied health professionals.

Total Credits 1

CUL 105 Culinary Fundamentals

Course Standard

Course Information

Description The Culinary Fundamentals course offers an overview of rudimentary cooking skills and techniques as well as basic knife skills. Students will experience instructional demonstrations and gain experience building their skills (roast, sauté, sear, pan fry, boil, simmer, braise, blanche, grill, broil) with a variety of ingredients (proteins, starches and vegetables). Additional topics and instruction in this course include sauces, plate presentation and

garnishes. Culinary vocabulary is introduced in this course and carried throughout the program.

Total Credits 3

CUL 110 Introduction to Gastronomy & Sustainability

Course Standard

Course Information

Description The Introduction to Gastronomy and Sustainability course introduces students to a number of basic scientific principles underpinning the methodology of cooking, food preparation and the enjoyment of food. Students will gain knowledge of the consumption of cooked food, the physiological and evolutionary implication of the senses, geographic and cultural influences on food, and the rationale behind food preparation. Topics and skills include an understanding of the coupling of senses to improve sense stimulation; altering flavor by chemical means; and modification of the coloration to improve the appearance of dishes.

Total Credits 3

CUL 115 Culinary Nutrition

Course Standard

Course Information

Description The Culinary Nutrition course introduces the roles of proteins, carbohydrates, fats and the process of metabolism in the human body. The students will be given opportunities to understand the benefits and limitations of specific dietary protocols. Students will build their skills in adapting recipes from traditional diets to meet therapeutic protocols. These protocols are the industry standard for specific dietary needs and students will learn to identify and use the therapeutic ingredients. Instructional demonstrations will include scratch recipes and information related to culinary innovation. The goal of the course is for students to understand how one's diet influences their holistic lifestyle.

Total Credits 3

CUL 120 Modern Banquet Cookery

Course Standard

Course Information

Description The Modern Banquet Cookery course provides best practices and instructional strategies for the industry standard in executing banquets and catering events. This course focuses on maintaining food quality and is based in foundational cooking methodology.

Total Credits 3

CUL 125 Baking & Pastry Skill Development

Course Standard

Course Information

Description The Baking and Pastry Skill Development course provides an introduction to basic baking and pastry skills including yeast breads, pastry doughs, quick breads, savory items, cookies, pies and cakes, frozen desserts, custards, soufflés, and chocolates, desserts plating techniques and garnishes. The course focuses on sustainability and the use of seasonal ingredients.

Total Credits 3

CUL 130 Culinary Innovation & Sustainability

Course Standard

Course Information

Description The Culinary Innovation and Sustainability Course provides a strong focus on customer service. Instruction is structured using "Design Thinking" within the context of a social, environmental, fiscal and personal sustainability with particular emphasis given to the "citizen chef".

Total Credits 3

CUL 135 Cuisines and Cultures of the United States

Course Standard

Course Information

Description The Cuisines and Cultures of the United States course offers the students instruction and experiences preparing, tasting, serving and evaluating traditional and regional dishes of the United States of America. Topics include exploring the flavor profiles, preparations and techniques representative of the cuisines from New England, the Mid-Atlantic, the South, the Floribbean, Cajun / Creole, the Midwest, Texas, the Southwest, the Rocky Mountains, California, Pacific Northwest, Alaska and Hawaii.

Total Credits 3

CUL 140 Global Cuisines and Cultures

Course Standard

Course Information

Description The Global Cuisines and Cultures course offers the student instruction and experiences preparing, tasting, serving and evaluating traditional and regional dishes of the Caribbean, Central and South America, Africa and Persia. Topics include exploring the flavor profiles, preparations and techniques representative of the cuisines from the Caribbean, Mexico, Brazil, Argentina, Chile, South Africa, Ethiopia, The DRC, Lebanon, The Arab Emirates and Iran.

Total Credits 3

CUL 145 Cuisines and Cultures of the Mediterranean

Course Standard

Course Information

Description The Cuisines and Cultures of the Mediterranean course offers the student instruction and experiences preparing, tasting, serving and evaluating traditional and regional dishes of the Mediterranean. Topics include exploring the flavor profiles, preparations and techniques representative of the cuisines from North, Central and South Italy, Spain, Portugal, Greece, the Middle East and North Africa.

Total Credits 3

CUL 150 Cuisines and Cultures of Northern Europe

Course Standard

Course Information

Description The Cuisines and Cultures of Northern Europe course offers the student instruction and experiences preparing, tasting, serving and evaluating traditional and regional dishes of Northern Europe. Topics include exploring the flavor profiles, preparations and techniques representative of the cuisines from France: Provence, Alsace, Bordeaux, Burgundy and Paris; Germany, Austria, Switzerland, Scandinavia, Great Britain, Eastern Europe.

Total Credits 3

CUL 155 Cuisines and Cultures of Asia

Course Standard

Course Information

Description The Cuisines and Cultures of Asia course offers the student instruction and experiences preparing, tasting, serving and evaluating traditional and regional dishes of the Asia. Topics include exploring the flavor profiles, preparations and techniques representative of the cuisines from China, Korea, Japan, Vietnam, Thailand, and India.

Total Credits 3

CUL 160 Garde Manger

Course Standard

Course Information

Description A "Garde Manger" is a cool, well-ventilated area where cold dishes (such as salads, hors d'oeuvres, appetizers, canapes, pates and terrines) are prepared and other foods are stored under refrigeration. The person in charge of this area is known as the *chef garde manager* or the pantry chef. This course provides students will a basic understanding and

instruction on preparatory skills which produce cold soups, sauces, salads, sandwiches, cured and smoked foods; sausages, terrines, pates, galantines and roulades; cheese, appetizers and hors d'oeuvre; condiments, crackers and pickles as well as buffet development. Additional topics in this course include buffet plating and presentation as well as cheese and charcuterie board design.

Total Credits 3

CUL 165 Culinary Arts Internship

Course Standard

Course Information

Description This course offers professional experience in the context of an educationally focused internship. Students will be placed in a culinary industry setting for the completion of this course.

Total Credits 3

CUL 170 Advanced Baking: Chocolate and Confectionary Techniques

Course Standard

Course Information

Description The Advanced Baking: Chocolate and Confectionary Techniques course offers the student instruction and experiences preparing, tasting, serving and evaluating traditional and contemporary chocolates, confectionary items, cookies, bon bons, petite fours and macaroons. Course activities include instruction that develops a working knowledge of ingredients, flavor profiles, preparations and techniques representative of chocolates and confectionary items of France, Italy, Switzerland and the United States.

Total Credits 3

CUL 175 Advanced Baking: Cakes and Desserts

Course Standard

Course Information

Description	The Advanced Baking: Cakes and Desserts course offers the student instruction and experiences preparing, tasting, serving and evaluating traditional and contemporary quick breads and cakes, custards, creams, mousses and soufflés, icings, glazes, sauces, frozen desserts and fruit desserts. Course activities include instruction that develops a working knowledge of ingredients, flavor profiles, preparations and techniques representative of cakes and desserts of France, Italy and Great Britain and the United States.
Total Credits	3

CUL 180 Advanced Baking: Breads and Rolls

Course Standard

Course Information

Description	The Advanced Baking: Breads and Rolls course offers the student instruction and experiences preparing, tasting, serving and evaluating traditional and contemporary breads and pastries. Course activities include instruction that develops a working knowledge of ingredients, flavor profiles, preparations and techniques representative of breads and pastries of France, Italy and Great Britain and the United States.
Total Credits	3

CWG 103 Blue Print Reading for Welders

Course Information

Description	Blue Print Reading for Welders gives instruction in the universal language of drawing interpretation from which information is conveyed for the manufacture of parts and assemblies. Students will fabricate a total of 4-5 projects from shop drawings. Welding symbols and abbreviations for well-meant fabrications: fillet welds, groove welds, back or backing and melt thru welds, plug and slot welds, surfacing welds, edge welds, spot welds, projection welds, seam welds, stud welds.
Total Credits	2

Pre/Corequisites

Prerequisite	CWG 105 Welding Safety & Orientation
--------------	--------------------------------------

CWG 105 Welding Safety & Orientation

Course Information

Description	The primary purpose of this course is to introduce and familiarize new students with the use and safety precautions to consider when using welding related equipment. The equipment in WSU Tech's welding lab compares to what is currently used by Industry. This course will enable a person who has never before used the equipment to set up and use it in an appropriate manner at an entry level and, doing so, meet safety standards. A separate safety exam will be given at the end of demonstrating the use and hazards it presents. Before students can use any piece of equipment on their own, they have to attain a score of 100% on the safety exam. Equipment in the lab that is excluded from the safety training may only be used under direct supervision of an instructor who is within an arm's length away.
Total Credits	1

CWG 110 Welding Applications

Course Information

Description	In this course student will learn the basic elements of SMAW, GMAW and GTAW. Additionally, students learn the equipment, processes and skills associated with welding cutting equipment.
Total Credits	4

Pre/Corequisites

Prerequisite	CWG 105 Welding Safety & Orientation
--------------	--------------------------------------

CWG 115 SMAW

Course Information

Description	Through classroom and/or lab/shop learning and assessment activities, students in this course will: describe the Shielded Metal Arc Welding process (SMAW); demonstrate the safe and correct set up of the SMAW workstation; associate SMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; demonstrate a surfacing weld with selected electrodes in the flat and horizontal positions; perform SMAW welds on selected weld joints; and perform visual inspection of welds.
Total Credits	3

Pre/Corequisites

Prerequisite	CWG 105 Welding Safety & Orientation
--------------	--------------------------------------

CWG 116 SMAW II

Course Information

Description	This course is designed to give students learning opportunities in the form of assessments and activities in the classroom, lab and/or shop. Students in this course will: describe the Shielded Metal Arc Welding process (SMAW); demonstrate the safe and correct set up of the (SMAW) workstation; associate (SMAW) electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; build t-joint and lap weld beads with selected electrodes in the flat position; build t-joint and lap weld beads with selected electrodes in the horizontal position; perform basic (SMAW) welds on selected metal thicknesses; and perform visual inspection of said welds. Student will also start out of position welds in the vertical (3) and overhead (4) positions. Including but not limited to fillet and groove welds.
Total Credits	4

Pre/Corequisites

Prerequisite	CWG 115 SMAW
--------------	--------------

CWG 120 GMAW

Course Information

Description Through classroom and/or shop/lab learning and assessment activities, students in this course will: explain gas metal arc welding process (GMAW); demonstrate the safe and correct set up of the GMAW workstation; correlate GMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; perform surfacing welds with selected electrodes in the flat position; perform surfacing welds with selected electrodes in the horizontal position; produce basic GMAW welds on selected weld joints; and conduct visual inspection of GMAW welds.

Total Credits 3

Pre/Corequisites

Prerequisite CWG 105 Welding Safety & Orientation

Prerequisite AVC 110 Safety/OSHA 10

CWG 121 GMAW II

Course Information

Description Through classroom and/or shop/lab learning and assessment activities, students in this course will: explain gas metal arc welding process (GMAW); demonstrate the safe and correct set up of the GMAW work station. Correlate GMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses. Build t-joint and lap-joint with selected electrodes in the flat position; build t-joint and lap-joint with selected electrodes in the horizontal position; perform basic GMAW welds. Student will perform welds in the vertical (3) and overhead (4) positions; this will include, but not limit to, fillet welds and groove welds.

Total Credits 4

Pre/Corequisites

Prerequisite CWG 120 GMAW

CWG 125 GTAW

Course Information

Description	Through classroom and/or lab/shop learning and assessment activities, students in this course will: explain the gas tungsten arc welding process (GTAW); demonstrate the safe and correct set up of the GTAW workstation; relate GTAW electrode and filler metal classifications with base metals and joint criteria; build proper tungsten electrode and filler metal selection and use based on metal types and thicknesses; perform surfacing welds with selected tungsten electrodes and filler material in the flat position; perform surfacing welds with selected tungsten electrodes and filler material in the horizontal position; perform basic GTAW welds on selected weld joints; and perform visual inspection of GTAW welds.
Total Credits	3

Pre/Corequisites

Prerequisite	CWG 105 Welding Safety & Orientation
--------------	--------------------------------------

CWG 126 GTAW II

Course Information

Description	Through classroom and/or shop/lab learning and assessment activities, students in this course will: explain the gas tungsten arc welding process (GTAW); demonstrate the safe and correct set up of the (GTAW) work station; correlate (GTAW) electrode and fill metals classifications with base metals and joint criteria; demonstrate proper tungsten electrode and filler metal selection used based on metal types and thicknesses. Students will build t-joint and lap-joints with selected electrodes and filler metal in the flat position; build t-joint and lap-joints with selected tungsten electrodes and filler metal in the horizontal position; perform basic (GTAW) welds. Students will perform welds in the vertical (3) and overhead (4) positions; this will include but not be limited to fillet welds and groove welds. Students will also be introduced to aluminum and stainless steel.
Total Credits	4

Pre/Corequisites

Prerequisite	CWG 125 GTAW
--------------	--------------

CWG 130 Robotic Welding

Course Information

Description	This course is designed to give students learning Robotic Welding opportunities in the form of assessments and activities in the classroom, lab and/or shop. Topics in the course will include robot axes, programing, backups and protection, safety, and maintenance of the welding and robot equipment.
Total Credits	1

Pre/Corequisites

Prerequisite	CWG 110 Welding Applications
--------------	------------------------------

CWG 141 Oxy Acetylene Welding & Cutting

Course Information

Description	The Oxy-Acetylene Welding and Cutting Course is designed to introduce students to the competencies required to safely and successfully demonstrate oxy-acetylene techniques in the classroom, lab and shop setting.
Total Credits	2

Pre/Corequisites

Prerequisite	CWG 105 Welding Safety and Orientation
Prerequisite	AVC 110 Safety/OSHA 10

CWG 145 Fabrication & Design

Course Information

Description	This course is designed to provide students with the opportunity to apply fabrication and design principles in various WATC campus related and student projects.
Total Credits	2

Pre/Corequisites

Prerequisite	CWG 103 Blue Print Reading for Welders
Prerequisite	CWG 121 GMAW II
Prerequisite	CWG 116 SMAW II
Prerequisite	CWG 149 Materials & Testing

CWG 149 Materials & Testing

Course Information

Description	Provides knowledge and skills in the areas of metallurgy and weld testing. Teaches the different uses and testing procedures for steel, stainless steel, aluminum and various alloys. Emphasizes welds approved for testing by the American Welding Society.
Total Credits	2

Pre/Corequisites

Prerequisite	CWG 105 Welding Safety & Orientation
--------------	--------------------------------------

CWG 155 Flux Cored Arc Welding

Course Information

Description	Through classroom and/or shop/lab learning and assessment activities, students in this course will: explain Flux Cored Arc Welding process (FCAW); demonstrate the safe and correct set up of the FCAW workstation; correlate FCAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; perform surfacing welds with selected electrodes in the flat position; perform surfacing welds with selected electrodes in the horizontal
--------------------	--

position; produce basic FCAW welds on selected weld joints; and conduct visual inspection of FCAW welds.

Total Credits 4

Pre/Corequisites

Prerequisite CWG 121 GMAW II

CWG 160 Welding Internship

Course Information

Description The internship represents an educational strategy linking the classroom with the acquisition of knowledge in the workplace. Through direct observation, reflection and evaluation, students gain an insight into the internship site's work, mission, and audience, how these relate to their academic study, as well as the organization's position in the broader industry or field. Students will produce a critical reflection on their internship experience demonstrating how they have addressed specific learning goals.

Total Credits 4

CWG 242 SMAW D1.1 Qualification

Course Information

Description Assists students in preparing to take the shielded metal arc welding (SMAW) qualification test. Students follow all safety procedures related to the various tools and equipment involved in this course. They understand the qualification and code system for structural qualification; identify, measure, cut and prepare the material required for this qualification; and learn the skills for structural welding. Students have time in class to practice these skills in preparation for the structural certification test(s). Completion of this course does not ensure qualification. A destructive bend test is performed during the last week of this course.

Total Credits 4

Pre/Corequisites

Prerequisite CWG 116 SMAW II

CWG 243 GMAW D1.1 Qualification

Course Information

Description Assists students in preparing to take the gas metal arc welding (GMAW) qualification test. Students follow all safety procedures related to the various tools and equipment involved in this course; understand the qualification and code system for structural qualification; identify, measure, cut and prepare materials required for this qualification; and learn the skills for structural welding. Students have time in class to practice these skills in preparation for the structural qualification test(s). Completion of this course does not ensure qualification. A destructive bend test is performed during the last week of this course.

Total Credits 4

Pre/Corequisites

Prerequisite CWG 121 GMAW II

DAS 113 Dental Materials I

Course Information

Description Covers identification of materials used in general dentistry; physical and chemical properties, functions and classifications. Includes principles of safety and aseptic technique involved in working with materials and equipment. Laboratory practice with impression materials, gypsum products, dental cements, waxes, resins and restorative materials.

Total Credits 4

Pre/Corequisites

Prerequisite BIO 150 Human Anatomy & Physiology
Prerequisite CPR 001 CPR for Healthcare Providers
Corequisite DAS 114 Dental Radiology I
Corequisite DAS 119 Dental Anatomy

Corequisite	DAS 120 Dental Science
Corequisite	DAS 122 Chairside Assisting I
Corequisite	DAS 147 Dental Practice Management
Corequisite	DAS 149 Infection Control in Dental Practice

DAS 114 Dental Radiology I

Course Information

Description	Fundamental concepts to acquire and utilize diagnostic intraoral radiographic equipment, radiographic characteristics and anatomy, mounting of radiographs, radiographic processing, safety relating and legal issues relating to dental radiographs. Course includes certification in the use of the NOMAD PRO, use of digital and traditional radiographic technology, and introduction to extraoral techniques.
Total Credits	3

Pre/Corequisites

Prerequisite	BIO 150 Human Anatomy & Physiology
Prerequisite	CPR 001 CPR for Healthcare Providers
Corequisite	DAS 113 Dental Materials I
Corequisite	DAS 119 Dental Anatomy
Corequisite	DAS 120 Dental Science
Corequisite	DAS 122 Chairside Assisting I
Corequisite	DAS 147 Dental Practice Management
Corequisite	DAS 149 Infection Control for Dental Practice

DAS 119 Dental Anatomy

Course Information

Description	Demonstrate a fundamental knowledge of tooth and oral anatomy, head and neck and the terminology necessary for more advanced skills and for a successful career in dentistry.
--------------------	---

Total Credits 2

Pre/Corequisites

Prerequisite	BIO 150 Human Anatomy and Physiology
Prerequisite	CPR 001 CPR for Healthcare Providers
Corequisite	DAS 113 Dental Materials I
Corequisite	DAS 114 Dental Radiology I
Corequisite	DAS 120 Dental Science
Corequisite	DAS 122 Chairside Assisting I
Corequisite	DAS 147 Dental Practice Management
Corequisite	DAS 149 Infection Control for Dental Practice

DAS 120 Dental Science

Course Information

Description	Students are provided with knowledge and basic dental pharmacology, management of dental and medical emergencies found in a dental setting. Students are expected to recognize signs and symptoms of specific emergencies to assist in the delivery of the suggested treatment. In addition, the student will discuss nitrous oxide and its administration. The student must complete a written examination on medical emergencies and administering/monitoring of nitrous oxide-oxygen analgesia with a proficiency of 75% or better and demonstrate administration and monitoring of nitrous oxide-oxygen analgesia with a proficiency of 85% or better in order to obtain the certification in administering/monitoring of nitrous-oxygen analgesia.
--------------------	---

Total Credits 2

Pre/Corequisites

Prerequisite	BIO 150 Human Anatomy and Physiology
Prerequisite	CPR 001 CPR for Healthcare Providers
Corequisite	DAS 113 Dental Materials I
Corequisite	DAS 114 Dental Radiology I
Corequisite	DAS 119 Dental Anatomy
Corequisite	DAS 122 Chairside Assisting I

Corequisite	DAS 147 Dental Practice Management
Corequisite	DAS 149 Infection Control for Dental Practice.

DAS 122 Chairside Assisting I

Course Information

Description Introduction to the dental health profession and dental assisting. Provides students with knowledge of performing extraoral/intraoral examination, prevention dentistry, dental assisting with direct and indirect restorations (basic and restorative instruments, moisture control, matrix system) and pediatric dentistry.

Total Credits 4

Pre/Corequisites

Prerequisite	BIO 150 Human Anatomy and Physiology
Prerequisite	CPR 001 CPR for Healthcare Providers
Corequisite	DAS 113 Dental Materials I
Corequisite	DAS 114 Dental Radiology I
Corequisite	DAS 119 Dental Anatomy
Corequisite	DAS 120 Dental Science
Corequisite	DAS 147 Dental Practice Management
Corequisite	DAS 149 Infection Control for Dental Practice

DAS 140 Chairside Assisting II

Course Information

Description Continuation of DAS122 Chairside Assisting I. This course will provide a foundation for assisting in the dental specialties of oral and maxillofacial surgery, endodontics, and removable prosthodontics, periodontics, orthodontics and dentofacial orthopedics, and pediatric dentistry. Procedures, instruments and materials involved in these areas will be studied.

Total Credits 2

Pre/Corequisites

Prerequisite	DAS 113 Dental Materials I
Prerequisite	DAS 114 Dental Radiology I
Prerequisite	DAS 119 Dental Anatomy
Prerequisite	DAS 120 Dental Science
Prerequisite	DAS 122 Chairside Assisting I
Prerequisite	DAS 147 Dental Practice Management
Prerequisite	DAS 149 Infection Control in Dental Practice
Corequisite	DAS 148 Dental Materials II
Corequisite	DAS 150 Clinical Experience

DAS 146 Dental Radiology II

Course Information

Description	Continuation of Radiology I with more intensive experience in exposing, processing and mounting intraoral films using the DXTTR manikin and patients. Students will be closely supervised and an evaluation will be made of each completed survey. Radiographic safety and infection control procedures are emphasized.
--------------------	---

Total Credits	1
----------------------	---

Pre/Corequisites

Prerequisite	DAS 113 Dental Materials I
Prerequisite	DAS 114 Dental Radiology I
Prerequisite	DAS 119 Dental Anatomy
Prerequisite	DAS 120 Dental Science
Prerequisite	DAS 122 Chairside Assisting I
Prerequisite	DAS 147 Dental Practice Management
Prerequisite	DAS 149 Infection Control in Dental Practice
Corequisite	DAS 140 Chairside Assisting II
Corequisite	DAS 148 Dental Materials II
Corequisite	DAS 150 Clinical Experience

DAS 147 Dental Practice Management

Course Information

Description This course will provide instruction in additional business office procedures with an introduction to computer and dental software, business ethics and jurisprudence, business oral and written communications, inventory systems and supply ordering, maintenance and retention of business records, management of patient information, financial and recall systems.

Total Credits 3

Pre/Corequisites

Prerequisite	BIO 150 Human Anatomy and Physiology
Prerequisite	CPR 001 CPR for Healthcare Providers
Corequisite	DAS 113 Dental Materials I
Corequisite	DAS 114 Dental Radiology I
Corequisite	DAS 119 Dental Anatomy
Corequisite	DAS 120 Dental Science
Corequisite	DAS 122 Chairside Assisting I
Corequisite	DAS 149 Infection Control for Dental Practice

DAS 148 Dental Materials II

Course Information

Description This course is a continuation of DAS113 Dental Materials I and includes identification of materials used in general dentistry and dental laboratory procedures. Proper manipulation of materials, their uses and correct storage are practiced. Study various laboratory procedures including manipulation of waxes, polishing and cleansing of a removable prosthesis, manipulation and use of acrylic and thermoplastics.

Total Credits 2

Pre/Corequisites

Prerequisite	DAS 113 Dental Materials I
Prerequisite	DAS 114 Dental Radiology I
Prerequisite	DAS 119 Dental Anatomy
Prerequisite	DAS 120 Dental Science
Prerequisite	DAS 122 Chairside Assisting I
Prerequisite	DAS 147 Dental Practice Management
Prerequisite	DAS 149 Infection Control in Dental Practice
Corequisite	DAS 140 Chairside Assisting II
Corequisite	DAS 150 Clinical Experience

DAS 149 Infection Control for Dental Practice

Course Information

Description	Introductory principles of microbiology: classification and characteristics of microbes with primary consideration to pathogenic microorganisms, causes of disease, transmission of infectious diseases, immune response, universal precautions, handling of hazardous materials and infection control techniques according to OSHA and ADA guidelines.
--------------------	---

Total Credits 2

Pre/Corequisites

Prerequisite	BIO 150 Human Anatomy and Physiology
Prerequisite	CPR 001 CPR for Healthcare Providers
Corequisite	DAS 113 Dental Materials I
Corequisite	DAS 114 Dental Radiology I
Corequisite	DAS 119 Dental Anatomy
Corequisite	DAS 120 Dental Science
Corequisite	DAS 122 Chairside Assisting I
Corequisite	DAS 147 Dental Practice Management

DAS 150 Clinical Experience

Course Information

Description This course gives students the opportunity to apply and practice the principles and procedures studied in the formal academic program. In private practice dental offices (both general practice and specialty offices), government clinics and public health facilities, students demonstrate the principles of chairside assisting, dental laboratory procedures and dental office procedures. Students will be assigned to two clinical rotations, one of which will be a general practice office.

Total Credits 7

Pre/Corequisites

Prerequisite	DAS 113 Dental Materials I
Prerequisite	DAS 114 Dental Radiology I
Prerequisite	DAS 119 Dental Anatomy
Prerequisite	DAS 120 Dental Science
Prerequisite	DAS 122 Chairside Assisting I
Prerequisite	DAS 147 Dental Practice Management
Prerequisite	DAS 149 Infection Control in Dental Practice
Corequisite	DAS 140 Chairside Assisting II
Corequisite	DAS 148 Dental Materials II

DIS 150 Directed Individual Studies

Course Information

Description Provides the instructor and student an opportunity to develop special learning environments. Instruction is delivered through occupational work experience, practicums, advanced projects, industry sponsored workshops, seminars, or specialized and/or innovative learning arrangements. Topics include: application of occupational technical skills, adaptability to the work environment, and problem solving. Each course is documented with a written agreement between the instructor and the student detailing expected requirements. The course is offered with variable credit ranging from 1 to 4 credit hours.

Total Credits 4

DMK 110 Introduction to Media Arts

Course Information

Description	Offers an introduction to media arts and the interconnectedness of audio, film, animation and gaming. Introduces fundamental concepts in analyzing and interpreting popular media delivery. The course will employ lectures, guest speakers, collaborative projects and experimental modes of learning. Content will also cover resources available on campus and in the community. Written assignments will encourage students to think about how various media and entertainment influences culture and their response to these influences. Attendance at outside events, lectures and festivals is required.
Total Credits	3

DMK 120 Basic Digital Editing

Course Information

Description	Introduction to skills, principles and ethics of using audio, images and video to tell stories via Internet-based media.
Total Credits	3

DMK 130 Digital Marketing Strategy

Course Information

Description	In this course, students will learn the basic elements of a robust digital marketing strategy. Using current real-world marketing campaigns as their "classroom" students will learn to create a marketing strategy that meets the customer's goals while being cognizant of the customer's budget. During this course, students will not only create a marketing plan but learn to present and defend their plan.
Total Credits	3

DMK 135 Social Media Marketing and Management

Course Information

Description Students will be equipped with the relevant knowledge, perspective and practical skills required to develop marketing strategies that leverage the opportunities inherent in social media for achieving business and marketing goals.

Total Credits 3

Pre/Corequisites

Prerequisite ENG 101 Composition I
Prerequisite DMK 120 Basic Digital Editing
Prerequisite DMK 130 Digital Marketing Strategy

DMK 140 Introduction to Audio/Visual Production

Course Information

Description This course will provide students with the skills associated with production and direction of video and audio programs. Hands-on use of standard audio and video production equipment to learn the most current and effective techniques will be integral to the course.

Total Credits 3

Pre/Corequisites

Prerequisite DMK 120 Basic Digital Editing

DMK 150 Search Engine Optimization & Marketing

Course Information

Description This course is designed to introduce the student to the core concepts of Search Engine Optimization (SEO) and Search Engine Marketing (SEM). Students will learn to ensure

their site is digestible by Google and other users resulting in better search engine rankings.

Total Credits 3

Pre/Corequisites

Prerequisite DMK 130 Digital Marketing Strategy

DMK 160 Introduction to Analytics

Course Information

Description This course is designed to introduce students to the core concepts of digital analytics. The course will explore the effectiveness of marketing campaigns and how to optimize results. This course will prepare students to take the Google Analytics Certification.

Total Credits 3

Pre/Corequisites

Prerequisite DMK 150 Search Engine Optimization & Marketing

DMK 165 Digital Marketing Portfolio

Course Information

Description In this course students will fine tune skills learned throughout the Digital Marketing Program while focusing their body of work on their specific job goals. This project based course will culminate with the student developing a body of work that represents their creativity and skills in the digital marketing arena. The course will allow for the development of new projects and allow students to re-address previous projects/assignments. Students will learn self-evaluation techniques as well as skills in preparing and presenting their work.

Total Credits 3

Pre/Corequisites

Prerequisite	DMK 110 Introduction to Media Arts
Prerequisite	DMK 120 Basic Digital Editing
Prerequisite	DMK 140 Introduction to Audio/Visual Production
Prerequisite	INF 147 Website Production & Management
Corequisite	DMK 160 Introduction to Analytics
Prerequisite	DMK 150 Search Engine Optimization & Marketing
Prerequisite	DMK 130 Digital Marketing Strategy

DMK 170 Digital Marketing Capstone

Course Information

Description	In this project-based course, students will apply the skills and knowledge acquired throughout the Digital Marketing program to a real-world project. In partnership with a local non-profit organization, students will create a digital marketing strategy designed to meet the customer needs. Students will produce a critical reflection on their capstone experience demonstrating how they have addressed specific learning goals. A successful project will include a project presentation to representatives of the non – profit organization, faculty and fellow students.
--------------------	--

Total Credits 4

Pre/Corequisites

Prerequisite	DMK 165 Digital Marketing Portfolio
--------------	-------------------------------------

DMK 175 Digital Marketing Internship

Course Information

Description	The internship represents an educational strategy linking the classroom with the acquisition of knowledge in the workplace. Through direct observation, reflection and evaluation, students gain an insight into the internship site's work, mission, and audience, how these relate to their academic study, as well as the organization's position in the broader industry or field. Students will produce a critical reflection on their
--------------------	---

internship experience demonstrating how they have addressed specific learning goals.

Total Credits 4

Pre/Corequisites

Prerequisite DMK 165 Digital Marketing Portfolio

ECO 105 Principles of Macroeconomics

Course Information

Description This course explores the fundamental aspects of the United States economy including growth, fiscal and monetary policies, unemployment, inflation, national debt, money and the Federal Reserve System. National and international policy topics are discussed.

Total Credits 3

Pre/Corequisites

Prerequisite ED Ready GMID - score of 39 or higher

ECO 110 Principles of Microeconomics

Course Information

Description Attention will be given to the methods of producing the goods and services that our economy provides. The following areas are explored: supply, demand, pricing, scarcity, business firms and business anti-trust and public interest, incomes, wages and salaries, income distribution, taxes, and tax reform.

Total Credits 3

Pre/Corequisites

Prerequisite EdReady GMID - Score of 39 or higher

EDU 120 Introduction to Teaching

Course Information

Description	This is a preparation course introducing students to the field of teaching. Topics include current learning standards, lesson plan components, the realities of teaching as a career, certification requirements, professional expectations, and an introduction to teaching strategies. This course provides students with the opportunity to explore the field of teaching, reflect on their interest in education, create and present an instructional lesson, and develop connections with other future educators.
Total Credits	3

EDU 121 Introduction to Teaching – Field Experience

Course Information

Description	This course provides an opportunity for hands-on experiences in a PreK-12 classroom. Students are required to complete 25 hours in the field during the semester. Students will reflect upon topics and issues such as diversity, effective teaching strategies, and educational structures as they are experienced in the PreK-12 classroom.
Total Credits	1

ELT 101 Fundamentals of Electronics Technology

Course Information

Description	This course is designed to introduce the student to the electronics profession through a review of required skills and abilities: problem solving, acquiring and interpreting measured results, soldering electronic components, and through laboratory experimentation including the use of electronics measurement devices, measuring electrical characteristics of resistive networks, light emitting diodes, phototransistors, and oscillators. The course completes with the design and implementation of simple robotics including the use of sensors, motors, actuators, and programming fundamentals.
--------------------	---

Total Credits 3

ELT 103 Introduction to Programming

Course Information

Description This course is an introduction to computer concepts, logic, and computer programming. The topics include designing, coding, debugging, testing, and documenting programs using the high-level programming language.

Total Credits 3

ELT 105 DC Electronics

Course Information

Description This course is designed to introduce the student to the fundamental concepts of electricity and electronics that involve direct current (DC) including the use of analog and digital multimeters, resistors, conductors, insulators, primary and secondary voltage cells, Ohm's Law, the Power Law, and Kirchhoff's Voltage and Current Laws, and application of these laws to the analysis of series, parallel, series/parallel resistive circuits, voltage dividers and current dividers.

Total Credits 2

Pre/Corequisites

Prerequisite	MTH 101 Intermediate Algebra
Corequisite	ELT 106 DC Electronics Lab
Prerequisite	ELT 101 Fundamentals of Electronics Technology
Corequisite	ELT 115 Digital Electronics Fundamentals
Corequisite	ELT 116 Digital Electronics Fundamentals Lab

ELT 106 DC Electronics Lab

Course Information

Description

This laboratory course is designed to introduce the student to the fundamental concepts of electricity and electronics that involve direct current (DC) including the use of analog and digital multimeters, resistors, conductors, insulators, primary and secondary voltage cells, Ohm's Law, the Power Law, and Kirchhoff's Voltage and Current Laws, and application of these laws to the analysis of series, parallel, series/parallel resistive circuits, voltage dividers and current dividers. This course will provide students with hands-on experience performing experiments using the FACET LabVolt Electronics Training System and MindSight Learning Content Management System.

Total Credits 2

Pre/Corequisites

Corequisite	ELT 105 DC Electronics
Prerequisite	MTH 101 Intermediate Algebra
Prerequisite	ELT 101 Fundamentals of Electronics Technology
Corequisite	ELT 115 Digital Electronics Fundamentals
Corequisite	ELT 116 Digital Electronics Fundamentals Lab

ELT 108 Fundamentals of Small UAS Operations

Course Information

Description

This course is an introduction to small unmanned aircraft systems (UAS) including knowledge areas covered on the airman knowledge test for a Remote Pilot Certificate with a Small Unmanned Aircraft Systems Rating. Successful completion will prepare the student for the FAA Part 107 Remote Pilot Certificate.

Total Credits 3

ELT 110 AC Electronics

Course Information

Description

This course is designed to introduce the student to the fundamental concepts of electricity and electronics that involve alternating current (AC) including the use of signal waveform generators, oscilloscopes, capacitors, inductors, and measurement of capacitance, inductance, capacitive reactance, inductive reactance, and RC and L/R time constants. Students will also learn the fundamentals of magnetism, electro-magnetism, and the use of transformers.

Total Credits 2

Pre/Corequisites

Prerequisite	ELT 105 DC Electronics
Prerequisite	ELT 106 DC Electronics Lab
Corequisite	ELT 111 AC Electronics Lab

ELT 111 AC Electronics Lab

Course Information

Description

This laboratory course is designed to introduce the student to the fundamental concepts of electricity and electronics that involve alternating current (AC) including the use of signal waveform generators, oscilloscopes, capacitors, inductors, and measurement of capacitance, inductance, capacitive reactance, inductive reactance, and RC and L/R time constants. Students will also learn the fundamentals of magnetism, electro-magnetism, and the use of transformers. This course will provide students with hands-on experience performing experiments using the FACET LabVolt Electronics Training System and MindSight Learning Content Management System.

Total Credits 2

Pre/Corequisites

Prerequisite	ELT 105 DC Electronics
Corequisite	ELT 110 AC Electronics
Prerequisite	ELT 106 DC Electronics Lab

ELT 115 Digital Electronics Fundamentals

Course Information

Description	This course is designed to provide students with the concepts and terminology utilized in digital electronics. The student will be exposed to the most basic concepts of digital electronics to a wide variety of the fundamentals for circuits used in today's avionics equipment and aircraft switching circuits. Once an understanding of the numbering system is achieved the course proceeds to basic logic circuits.
Total Credits	2

Pre/Corequisites

Prerequisite	ELT 101 Fundamentals of Electronics Technology
Corequisite	ELT 105 DC Electronics
Prerequisite	MTH 101 Intermediate Algebra
Corequisite	ELT 116 Digital Electronics Fundamentals Lab
Corequisite	ELT 106 DC Electronics Lab

ELT 116 Digital Electronics Fundamentals Lab

Course Information

Description	This course is designed to provide students with the concepts and terminology utilized in digital electronics. The student will be exposed to the most basic concepts of digital electronics to a wide variety of the fundamentals for circuits used in today's avionics equipment and aircraft switching circuits. During this lab portion the student will be introduced to test equipment used to diagnose digital electronic discrepancies.
--------------------	---

Total Credits 2

Pre/Corequisites

Corequisite	ELT 115 Digital Electronics Fundamentals
Prerequisite	ELT 101 Fundamentals of Electronics Technology
Corequisite	ELT 105 DC Electronics
Corequisite	ELT 106 DC Electronics Lab
Prerequisite	MTH 101 Intermediate Algebra

ELT 120 Solid State Electronics

Course Information

Description	This course is designed to introduce the student to the fundamental concept and uses of solid state devices including diodes, bipolar junction transistors, and field effect transistors in circuit designs such as rectifiers, clamping circuits, switching circuits, single- stage and multi-stage transistor amplifiers, and power amplifiers.
--------------------	---

Total Credits 2

Pre/Corequisites

Prerequisite	ELT 110 AC Electronics
Corequisite	ELT 121 Solid State Electronics Lab
Prerequisite	ELT 111 AC Electronics Lab

ELT 121 Solid State Electronics Lab

Course Information

Description	This course is designed to introduce the student to the fundamental concept and uses of solid state devices through laboratory experimentation including diodes, bipolar junction transistors, and field effect transistors in circuit designs such as rectifiers, clamping circuits, switching circuits, single-
--------------------	---

stage and multi-stage transistor amplifiers, and power amplifiers. This course is a companion to the Solid State Electronics course.

Total Credits 2

Pre/Corequisites

Corequisite	ELT 120 Solid State Electronics
Prerequisite	ELT 110 AC Electronics
Prerequisite	ELT 111 AC Electronics Lab

ELT 125 Introduction to Avionics

Course Information

Description	This course is designed to give an overview of the entire avionics field. All major avionics systems, their components and fundamentals of system interactions will be examined. Common avionics abbreviations and acronyms, relevant FAA regulations, and system usages will be studied.
--------------------	---

Total Credits 2

ELT 127 Wiring & Cannon Plug Lab

Course Information

Description	The student will learn methods of construction and repair of avionics system wiring harnesses. Students will learn and perform practice exercises with the most common types of aircraft connectors, tooling, and wiring systems used in today's aircraft.
--------------------	--

Total Credits 2

ELT 130 Avionics Systems & Troubleshooting

Course Information

Description	This course introduces the student to avionics testing and troubleshooting. Students will study the troubleshooting theory of VHF COM, VHF NAV, ILS, Marker Beacon, DME, Transponder, and Pitot-Static systems. Further study of complex wiring diagrams will offer the opportunity for the student to relate the theoretical to the practical. All theory oriented studies are performed under this class.
Total Credits	2

Pre/Corequisites

Corequisite	ELT 131 Avionics Systems & Troubleshooting Lab
-------------	--

ELT 131 Avionics Systems & Troubleshooting Lab

Course Information

Description	This course is the laboratory component of ELT 130. The student will operate the most common avionics test equipment and will learn to perform common functional tests: VHF COM, VHF NAV, ILS, Marker Beacon, Transponder, DME, SWR, and operation of a Time Domain Reflectometer. Troubleshooting of common avionics problems will also be introduced as students troubleshoot system faults on avionics system trainers and a variety of aircraft. All laboratory performance requirements in support of ELT 130 are performed in this class.
Total Credits	2

Pre/Corequisites

Corequisite	ELT 130 Avionics Systems & Troubleshooting
-------------	--

ELT 135 Communications, Navigation, and Surveillance Systems I

Course Information

Description	This course and its associated laboratory section is the first of two courses which study the electrical and electronic characteristics of typical aircraft
--------------------	---

electrical power generation and distribution systems, instrument systems, communications systems and navigation systems. In this first part of the course, students will advance through the design of a complete avionics installation, learning the primary system characteristics and interconnection requirements of typical avionics boxes. They will study aircraft wiring diagrams, learn a basic CAD system, design a small general aviation flight deck utilizing CAD.

Total Credits 2

Pre/Corequisites

Prerequisite ELT 125 Introduction to Avionics Systems

Corequisite ELT 136 Communications, Navigation, and Surveillance Systems I Lab

ELT 136 Communications, Navigation, and Surveillance Systems I Lab

Course Information

Description This course is the laboratory component of ELT 135. The student will operate CAD software to create and design an avionics flight desk design. The student will create an electrical load analysis and a cost breakdown for their design.

Total Credits 3

Pre/Corequisites

Corequisite ELT 135 Communication, Navigation, and Surveillance Systems I

Prerequisite ELT 125 Introduction to Avionics

ELT 137 Communications, Navigation, and Surveillance Systems II

Course Information

Description This course and its associated laboratory section continues the study of typical avionics systems. In this course, students will learn the

characteristics and requirements of integrated electronics systems such as the Garmin. They will also learn basic instrument theory and operation and will study engine and system operation monitoring. All theory oriented studies are performed under this class.

Total Credits 2

Pre/Corequisites

Prerequisite	ELT 135 Communications, Navigation and Surveillance Systems I
Corequisite	ELT 138 Communications, Navigation and Surveillance Systems II Lab
Prerequisite	ELT 136 Communications, Navigation and Surveillance Systems I Lab

ELT 138 Communications, Navigation, and Surveillance Systems II Lab

Course Information

Description	This course is the laboratory component of ELT 137. The student will construct and install a wire harness for a small general aviation avionics and instrument panel, construct a pitot-static system, wiring out their harness, install their harness, perform safe-to-turn-on testing, install the radios and instruments and test the completed avionics and instrument system. All laboratory performance requirements in support of ELT 137 are performed in this class.
--------------------	---

Total Credits 3

Pre/Corequisites

Prerequisite	ELT 136 Communications, Navigation and Surveillance Systems I Lab
Corequisite	ELT 137 Communications, Navigation, and Surveillance Systems II
Prerequisite	ELT 135 Communications, Navigation, and Surveillance Systems I

ELT 140 Aircraft and Electronics for NCATT Applications

Course Information

Description This class helps student increase the knowledge and skills required to troubleshoot and repair practical electronics projects and prepares the student to be successful on the avionics primary certification test given by the National Center for Aerospace and Transportation Technologies.

Total Credits 2

Pre/Corequisites

Prerequisite ELT 130 Avionics Systems and Troubleshooting

Prerequisite ELT 131 Avionics Systems and Troubleshooting Lab

ELT 145 Integrated Circuits and Systems

Course Information

Description This course is designed to introduce the student to the uses of commercially-available integrated circuit devices including operational amplifiers, oscillators, and voltage regulators in circuit designs such as comparators, converters, summing amplifiers, integrators, differentiators, active filters, timing circuits, series and shunt voltage regulators, radio frequency amplifiers, basic receivers, amplitude and frequency modulators, and phase locked loops.

Total Credits 2

Pre/Corequisites

Prerequisite ELT 121 Solid State Electronics Lab

Prerequisite ELT 120 Solid State Electronics

Corequisite ELT 150 Antennas and Wave Propagation

Corequisite ELT 151 Antennas and Wave Propagation Lab

Corequisite ELT 146 integrate Circuits and Systems Lab

ELT 146 Integrated Circuits and Systems Lab

Course Information

Description

This course is designed to introduce the student through lab experiments to the uses of commercially-available integrated circuit devices including operational amplifiers, oscillators, and voltage regulators in circuit designs such as comparators, converters, summing amplifiers, integrators, differentiators, active filters, timing circuits, series and shunt voltage regulators, radio frequency amplifiers, basic receivers, amplitude and frequency modulators, and phase locked loops. This course is a companion to the Integrated Circuits and Systems course.

Total Credits 2

Pre/Corequisites

Corequisite	ELT 145 Integrated Circuits and Systems
Prerequisite	ELT 120 Solid State Electronics
Prerequisite	ELT 121 Solid State Electronics Lab
Corequisite	ELT 150 Antennas and Wave Propagation
Corequisite	ELT 151 Antennas and Wave Propagation Lab

ELT 150 Antennas and Wave Propagation

Course Information

Description

This course introduces the student to the basic principles of transmission lines and electromagnetic wave propagation and applies these principles to antenna theory and microwave devices with applications to terrestrial and satellite communications systems.

Total Credits 2

Pre/Corequisites

Corequisite	ELT 145 Integrated Circuits and Systems
Corequisite	ELT 146 Integrated Circuits and Systems Lab
Prerequisite	ELT 120 Solid State Electronics

Prerequisite	ELT 121 Solid State Electronics Lab
Corequisite	ELT 151 Antennas and Wave Propagation Lab

ELT 151 Antennas and Wave Propagation Lab

Course Information

Description This laboratory course is a companion to the course on antennas and wave propagation and gives the students the practical application of electromagnetic wave propagation by applying these principles to antenna theory and microwave devices with applications to terrestrial and satellite communications systems.

Total Credits 3

Pre/Corequisites

Corequisite	ELT 150 Antennas and Wave Propagation
Corequisite	ELT 145 Integrate Circuits and Systems
Prerequisite	ELT 120 Solid State Electronics
Prerequisite	ELT 121 Solid State Electronics Lab
Corequisite	ELT 146 Integrated Circuits and Systems Lab

ELT 155 Electronic Communication Circuits and Systems

Course Information

Description This course introduces the basic principles and operation of system components of wireless communication systems. The course begins with traditional analog systems, modern digital techniques, and continues into cellular, radio, paging systems, and wireless data networks, data communication and the internet, high-definition television, and fiber optics.

Total Credits 2

Pre/Corequisites

Corequisite ELT 156 Electronic Communication Circuits and Systems Lab

ELT 156 Electronic Communication Circuits and Systems Lab

Course Information

Description

This course is a laboratory companion course designed to introduce the student to the practical applications of the basic principles and operation of system components of wireless communication systems. The course begins with traditional analog AM, SSB, and angle modulation systems, and continues with modern digital techniques including Pulse-Amplitude Modulation (PAM), PAM Time-Division Multiplexing, and Pulse-Time Modulation techniques.

Total Credits 3

Pre/Corequisites

Corequisite ELT 155 Electronic Communication Circuits and Systems

ELT 160 Microprocessor and Microcontroller Systems

Course Information

Description

This course is designed to introduce the student to the fundamental concepts and uses of microprocessors and microcontroller systems including microprocessor architecture, assembly language programming, and the application of microcontrollers in embedded systems.

Total Credits 2

Pre/Corequisites

Prerequisite	ELT 120 Solid State Electronics
Prerequisite	ELT 121 Solid State Electronics Lab
Corequisite	ELT 161 Microprocessor and Microcontroller Systems Lab

ELT 161 Microprocessor and Microcontroller Systems Lab

Course Information

Description This course is a laboratory companion course in microprocessors and microcontrollers. The course is designed to introduce the student through assembly programming assignments the fundamental concepts and uses of microprocessors and microcontrollers in the control of electronic hardware, particularly in the application of microcontrollers into embedded systems.

Total Credits 3

Pre/Corequisites

Corequisite	ELT 160 Microprocessor and Microcontroller Systems
Prerequisite	ELT 120 Solid State Electronics
Prerequisite	ELT 121 Solid State Electronics Lab

ELT 165 Electronic Measurement and Instrumentation

Course Information

Description This course is designed to introduce the student to the fundamental concepts of measurement techniques of voltage, current, resistance, capacitance, and frequency, and the use of various transducers and sensors. Students will also learn the fundamentals of signal conditioning circuits and their use with data acquisition systems.

Total Credits 2

Pre/Corequisites

Prerequisite	ELT 160 Microprocessor and Microcontroller Systems
Prerequisite	ELT 161 Microprocessor and Microcontroller Systems Lab
Corequisite	ELT 166 Electronic Measurement and Instrumentation Lab

ELT 166 Electronic Measurement and Instrumentation Lab

Course Information**Description**

This course is a laboratory companion course designed to introduce the student to the practical applications of measurement techniques and the use of various transducers including resistive strain gages, resistive and piezo-electric pressure sensors, piezo-electric vibration sensors, and RTD temperature sensors. Students will also construct practical signal conditioning circuits and use commercially-available data acquisition systems.

Total Credits 3

Pre/Corequisites

Corequisite	ELT 165 Electronic Measurement and Instrumentation
Prerequisite	ELT 160 Microprocessor and Microcontroller Systems
Prerequisite	ELT 161 Microprocessor and Microcontroller Systems Lab

ELT 170 Practical Electronics Technology for ETA Applications

Course Information**Description**

This course is designed to prepare through summarization, practical exercises, and standards review for the Electronics Technicians Association International (ETA-I) Student Electronics Technician (SET) Certification. These s are taken directly from the ETA-I SET

Basic Electronics Competency Requirements (http://www.eta-i.org/comps/SET_comps.pdf).

Total Credits 2

Pre/Corequisites

Prerequisite ELT 145 Integrated Circuits and Systems

Prerequisite ELT 146 Integrated Circuits and Systems Lab

EMS 103 EMT 1

Course Information

Description The EMT 1 course provides students with the academic and professional knowledge and skills to provide emergency medical care and transportation for critical and emergent patients who access the emergency medical systems. The student will learn about an EMS system, medical and legal considerations, and documentation. The students will learn medical terminology, anatomy, and physiology as it relates to a medical emergency patient. Upon completion of this course, students will possess the knowledge and skills necessary to provide patient care and transportation of medical emergency patients. The student will be prepared to function as part of a comprehensive EMS response team, under medical oversight. Students in the EMT course will apply basic medical interventions with equipment typically found on an ambulance in order to act as a link from the scene of the emergency to the emergency health care facility.

Total Credits 6

Pre/Corequisites

Corequisite CPR 001 CPR for Healthcare Providers

EMS 104 EMT 2

Course Information

Description The EMT 2 course provides students with the academic and professional knowledge and skills to provide emergency medical care and transportation

for critical and emergent patients who access the emergency medical systems. Upon completion of this course, students will possess the knowledge and skills necessary to provide patient care and transportation for trauma and special populations. The student will be prepared to function as part of a comprehensive EMS response team, under medical oversight. Students in the EMT course will apply basic medical interventions with trauma equipment typically found on an ambulance in order to act as a link from the scene of the emergency to the emergency health care facility. EMT 2 students will learn about EMS system operations including HazMat and Mass Casualty Incidents. EMT 1 and EMT 2 prepare students for EMT National Registry Exam and covers all EMT Education Standards for EMT – level Instruction.

Total Credits 6

Pre/Corequisites

Prerequisite EMS 103 EMS 1

EMS 105 Emergency Medical Technician

Course Information

Description The EMT course provides students with the academic and professional knowledge and skills to provide emergency medical care and transportation for critical and emergent patients who access the emergency medical systems. Upon completion of this course, students will possess the knowledge and skills necessary to provide patient care and transportation. The student will be prepared to function as part of a comprehensive EMS response team, under medical oversight. Students in the EMT course will apply basic medical interventions with equipment typically found on an ambulance in order to act as a link from the scene of the emergency to the emergency health care facility. This course prepares students for EMT National Registry Exam and covers all EMT Education Standards for EMT – level Instruction.

Total Credits 12

Pre/Corequisites

Corequisite CPR 001 CPR for Healthcare Providers

EMS 115 Tactical Medicine

Course Information

Description This course will cover tactical emergency medicine—the practice of emergency medicine in the field during disasters, police or military conflicts, mass causality events, and community incidents. Key topics covered include hostage survival, insertion and extraction techniques, continuum of force, medical support, planning and triage, medical evaluation in the incident zone, care in custody, medical control of incident site, decontamination, community communication, and more.

Total Credits 3

Pre/Corequisites

Prerequisite EMS 105 Emergency Medical Technician

ENG 010 College Reading Skills

Course Information

Description This course is designed to equip students for success in the writing required during academic endeavors. Review of grammar is individualized and self-paced, using a computerized software program. Writing assignments will include a number of paragraphs and major essay. This course does not count toward the A.A., A.S., A.A.S., or A.G. S. degree.

Total Credits 3

ENG 020 Basic Writing Skills

Course Information

Description Enables students to construct complete simple, compound and complex sentences by applying grammar concepts learned. Enables students to write a focused, organized, supported paragraph without fragment, run-on or comma splice errors This course does not count toward the Certificate of

Completion (COC), Technical Certificate (TC), or Associate of Applied Science degree (AAS).

Total Credits 3

ENG 030 English

Course Information

Description Designed to equip students for success in the writing required during academic endeavors. Review of grammar is individualized and self-paced, using a computerized software program. Writing assignments will include a number of paragraphs and major essay. To demonstrate readiness for and be allowed to enroll in ENG 101 Composition I, students must pass this course with a grade of C or above and pass the final exam. This course does not count toward AS, AA, AGS or AAS degrees.

Total Credits 3

Pre/Corequisites

Prerequisite EBS 103 Basic Paragraph Writing

ENG 035 PACER English

Course Information

Description This course is designed to equip students for success in the writing, reading, and effective student skills required during academic endeavors at the college level. Review of grammar and reading skills is individualized and self-paced, using a computerized software program in addition to instructor-led lessons. Writing assignments will include a number of paragraphs and reading will include practice with college-level texts.

Total Credits 5

ENG 040 Bridge to College English

Course Information

Description Bridge to College English is for students testing in the 46-68 range on the Accuplacer reading and/or sentence skills tests. Upon successful completion of this intensive writing program, students will enroll in ENG 101 Composition I. This two-week course offers a refresher on essential reading and writing skills that students are expected to have mastered before entering ENG 101 Composition I.

Total Credits 1

ENG 100 Composition I Lab

Course Information

Description This lab is designed for students to work in an adaptive setting based on their skills and needs in reading and writing skills. Students will take this lab in conjunction with English 101 Composition I.

Total Credits 1

Pre/Corequisites

Prerequisite ENG 035 Pacer English

Corequisite ENG 101 Composition I

ENG 101 Composition I

Course Information

Description This course is designed to improve the reading and writing skills of students. The emphasis is on fundamental principles of written English in structurally correct sentences, paragraphs and expository themes. Critical analysis of essays will be used to aid in developing the student's thinking, support of thesis and style. Students are introduced to the basic components of research by writing a documented essay in Modern Language Association (MLA) style.

Total Credits 3

Pre/Corequisites

Prerequisite ENG 030 English

ENG 110 Introduction to Literature

Course Information

Description This course is an introduction to the short forms of literature, designed to develop understanding and appreciation of good literature. Study includes short stories, dramas and poems.

Total Credits 3

Pre/Corequisites

Prerequisite ENG101 Composition I

ENG 120 Composition II

Course Information

Description This course is designed to immerse students in the study and practice of persuasive and argumentative, report, and research writing emphasizing analysis and research and reading, interpreting, and evaluation of selected texts.

Total Credits 3

Pre/Corequisites

Prerequisite ENG 101 Composition I

ENG 205 Introduction to Creative Writing

Course Information

Description In this course students will combine the writing and revising of original works with the critical readings of published works from poetry, fiction, and play/film writing. Students will learn the basic elements of writing in each selected genre and experiment with producing their own works in those genres. During class students will share their work and provide feedback to classmates. Additionally, class time will include open discussion about the craft of writing and the assigned readings.

Total Credits 3

Pre/Corequisites

Prerequisite ENG 120 Composition II

ENG 211 Introduction to Writing for Digital Media

Course Information

Description In this course, students will explore the writing genres associated with digital media and learn the essential elements of writing for a digital audience. Students will actively participate in the writing process while creating original work in multiple digital media environments. Students are expected to share original works and provide feedback to classmates. Additionally, class time will include the open discussion of writing for the digital audience and assigned readings.

Total Credits 3

Pre/Corequisites

Prerequisite ENG 120 Composition II

ENT 110 Introduction to Entrepreneurship

Course Information

Description The purpose of this course is to familiarize students with the world of small business. Students will be introduced to the concepts needed to seek out business opportunities as well as the tools needed to evaluate successful

ventures. Considerable attention will be given to the concepts of planning, financing and marketing new businesses.

Total Credits 3

ENT 115 Entrepreneurship II

Course Information

Description The marketplace has changed dramatically over the last 20 years. To compete and grow, small businesses must do more than just give lip service to putting the customer at the center of the business. Students learn the different paths to business ownership, how to effectively market new products, management strategies for the 21st century and how to plan financially for a business.

Total Credits 3

Pre/Corequisites

Prerequisite ENT 110 Introduction to Entrepreneurship

FSI 101 King Air Maintenance Practical

Course Information

Description This course is designed to provide Maintenance Technicians hands on training with the King Air 90 Series aircraft as defined by the applicable Practical Task Assessment Log (PTAL).

Total Credits 3

FOL 101 Spanish I

Course Information

Description This course is designed to help the student increase their knowledge of Spanish vocabulary, grammar, elementary syntax and composition, basic reading, and pronunciation with practice in everyday conversation.

Total Credits 5

FOL 110 Spanish II

Course Information

Description This course is designed to help the student increase their knowledge of Spanish vocabulary, grammar, elementary and intermediate syntax and composition, basic reading, and pronunciation with practice in everyday conversation.

Total Credits 5

Pre/Corequisites

Prerequisite FOL 101 Spanish I

FOL 120 Essential Spanish for the Workplace

Course Information

Description This course provides immediate access to functional Spanish language skills and cultural competence for non-Spanish speaking students enrolled in a career-specific degree, diploma, or certificate program. It is a practical step toward communication in settings where comprehension is crucial. Cultural awareness will be addressed, as well. The vocabulary presented will be tailored to the specific needs of the target occupation. No prior knowledge of Spanish is necessary.

Total Credits 4

GEO 101 Principles of Geography

Course Information

Description This course is designed to provide the student with an introduction of how geography influences social, cultural, economic, political, and environmental systems. Students will gain an understanding of how modern

technology and global human ecology shape our knowledge of land, environment, and culture.

Total Credits 3

GRA 101 Certified Nurse Aide

Course Information

Description Prepares students to be caregivers in nursing homes while working under the supervision of licensed nurses. Includes classroom instruction, laboratory and clinical experience. Program meets Kansas State Department of Health and Environment guidelines. Graduates may take the state examination to become a certified nurse aide.

Total Credits 5

GRA 119 Medication Aide

Course Information

Description Focuses on the knowledge and skills needed for safe medication administration in long-term care facilities. Graduates are eligible to take the Kansas certification examination to become certified medication aides.

Total Credits 5

HEM 105 Sanitation and Safety

Course Information

Description In this course, students will study the basic principles of bacteriology, foodborne illness, sanitation, workplace safety, personal hygiene, food security, health regulations, and inspections. The course emphasizes the importance of sanitary equipment and facilities, and pest control. Students must complete the National Restaurant Association Educational Foundation certification exam to pass this course.

Total Credits 2

HEM 110 Hospitality Math

Course Information

Description Reviews the fundamentals of mathematics, including calculating percent, ratios, decimals, fractions, weights and measures, and introductory algebra concepts. Emphasizes the application of mathematical fundamentals to a variety of culinary and hospitality uses. Provides instruction in equivalencies, recipe costing and conversion, calculating food and labor cost percentages, baker's percentages, yield conversions, and selling prices.

Total Credits 3

Pre/Corequisites

Prerequisite Accuplacer Nex Gen Arithmetic NGAC score of 276

HEM 115 Introduction to the Hospitality Industry

Course Information

Description In this course, students will gain knowledge and develop an appreciation of the multifaceted elements of hospitality management by exploring all aspects of the hospitality, tourism, and event management industries including hotels and lodging; food-service and restaurants; travel and tourism; transportation; meetings, conventions and expositions; leisure and recreation; and, special events. While the focus is on basic hospitality and management principles, this course also reflects the impact of current social, economic, technological, and political factors on operations in the field. Further, students are offered information on the array of careers available in the various segments of the hospitality industry.

Total Credits 2

HEM 120 Hospitality Service Techniques

Course Information

Description	Defines and describes points of service in restaurant and banquet functions. Discusses sales techniques, cash handling standards, methods of customer satisfaction, and other topics related to the smooth operation of any restaurant or catered event. The course includes hands-on experience at breakfast, lunch, and dinner in a full-service restaurant. Emphasizes proper service procedures, cost control, and efficient work methods.
Total Credits	3

HEM 125 Food & Beverage Management Fundamentals

Course Information

Description	Principal analysis of directing a food and beverage operation, with the examination of food and beverage in restaurant operations. Students will engage in theory and practices of service fundamentals pertaining to food and beverage management.
Total Credits	3

HEM 130 Introduction to Lodging Operations

Course Information

Description	The course provides students with an overview of the lodging industry and how its functions are organized and operated. Introduces each of the seven traditional disciplines: general management, hotel sales, financial control, room operations, food, and beverage operations, human resources, and physical plant maintenance. Emphasizes business ethics and effective communication.
Total Credits	2

HEM 135 Hospitality Human Resource Management

Course Information

Description	Introduces the functions of human resource management including, planning, communicating, recruiting, hiring, training, coaching, counseling, discipline, performance evaluation, termination, and labor relations. Emphasizes the legal issues related to managerial decisions, motivation and managing diversity.
Total Credits	3

HEM 140 Hospitality Financial Management

Course Information

Description	Provides an understanding of basic accounting concepts and procedures relevant to hotel and food service operations. Instructs students in recording transactions, understanding financial statements, managing inventory, payroll problems, occupancy issues and other special topics.
Total Credits	3

HEM 145 Fundamentals of Excellent Customer Service

Course Information

Description	This course is designed to prepare students for the professional world of customer service. Students in this course receive a solid knowledge base in the areas of exemplary customer service practices, customer service in the internet age and, business communications.
Total Credits	3

HEM 150 Food and Beverage Operations

Course Information

Description Focuses on the management of food and beverage operations in hospitality establishments. Includes restaurant, banquets, room service, beverage operations, menu planning, and stewarding. This course prepares students to take the ServSafe Food Handlers Certification.

Total Credits 3

Pre/Corequisites

Prerequisite	HEM 105 Sanitation and Safety
Prerequisite	HEM 110 Hospitality Math
Prerequisite	HEM 115 Introduction to the Hospitality Industry
Prerequisite	HEM 120 Hospitality Service Techniques
Prerequisite	HEM 125 Food & Beverage Management Fundamentals
Prerequisite	HEM 130 Introduction to Lodging Operations
Prerequisite	HEM 135 Hospitality Human Resource Management
Prerequisite	HEM 140 Hospitality Financial Management
Prerequisite	HEM 145 Fundamentals of Excellent Customer Service

HEM 155 Front Office Management

Course Information

Description This course introduces students to the Lodging Operations Front Office. Topics include reservations, front desk, guest services and human resource deployment issues specific to front office operations management. This course familiarizes students with the principles of front desk operational procedures; examines current trends in guest services; discusses online distribution of room inventory; and introduces students to the principles of revenue management strategies. Students work with a Property Management Software to become familiar with computerized reservations, arrival and charge posting systems.

Total Credits 3

Pre/Corequisites

Prerequisite	HEM 105 Sanitation and Safety
Prerequisite	HEM 110 Hospitality Math

Prerequisite	HEM 115 Introduction to Hospitality Industry
Prerequisite	HEM 120 Hospitality Service Techniques
Prerequisite	HEM 125 Food & Beverage Management Fundamentals
Prerequisite	HEM 130 Introduction to Lodging Operations
Prerequisite	HEM 135 Hospitality Human Resource Management
Prerequisite	HEM 140 Hospitality Financial Management
Prerequisite	HEM 145 Fundamentals of Excellent Customer Service

HEM 160 Housekeeping and Environmental Services

Course Information

Description Examines the role of supervisory functions in the housekeeping department. Provides a thorough overview of maintaining a quality staff, planning and organizing, technical details of cleaning a room, managing the laundry, and control of supplies and equipment.

Total Credits 3

Pre/Corequisites

Prerequisite	HEM 105 Sanitation and Safety
Prerequisite	HEM 110 Hospitality Math
Prerequisite	HEM 115 Introduction to Hospitality Industry
Prerequisite	HEM 120 Hospitality Service Techniques
Prerequisite	HEM 125 Food & Beverage Management Fundamentals
Prerequisite	HEM 130 Introduction to Lodging Operations
Prerequisite	HEM 135 Hospitality Human Resource Management
Prerequisite	HEM 140 Hospitality Financial Management
Prerequisite	HEM 145 Fundamentals of Excellent Customer Service

HEM 165 Revenue Management

Course Information

Description	Revenue Management is critical to the hospitality industry due to the perishable nature of service-based products. The fundamental principles and concepts of revenue management covered in this course are capacity management, duration control, demand, and revenue forecasting, discounting, overbooking practices, displacement analysis, channel management, and pricing execution.
Total Credits	3

Pre/Corequisites

Prerequisite	HEM 105 Sanitation and Safety
Prerequisite	HEM 110 Hospitality Math
Prerequisite	HEM 115 Introduction to Hospitality Industry
Prerequisite	HEM 120 Hospitality Service Techniques
Prerequisite	HEM 125 Food & Beverage Management Fundamentals
Prerequisite	HEM 130 Introduction to Lodging Operations
Prerequisite	HEM 135 Hospitality Human Resource Management
Prerequisite	HEM 140 Hospitality Financial Management
Prerequisite	HEM 145 Fundamentals of Excellent Customer Service

HEM 170 Sales

Course Information

Description	The course introduces the principles, concepts, and systems utilized in the marketing and sales areas within the hospitality industry. The course provides an in-depth analysis of marketing strategies and theories with a holistic appreciation of the scope and importance of the marketing and sales functions in the hospitality business.
Total Credits	3

Pre/Corequisites

Prerequisite	HEM 105 Sanitation and Safety
Prerequisite	HEM 110 Hospitality Math
Prerequisite	HEM 115 Introduction to Hospitality Industry

Prerequisite	HEM 120 Hospitality Service Techniques
Prerequisite	HEM 125 Food & Beverage Management Fundamentals
Prerequisite	HEM 130 Introduction to Lodging Operations
Prerequisite	HEM 135 Hospitality Human Resource Management
Prerequisite	HEM 140 Hospitality Financial Management
Prerequisite	HEM 145 Fundamentals of Excellent Customer Service

HEM 175 Event Catering Strategies

Course Information

Description	This course serves as an introduction to planning catering events, responsibilities of the caterer and the event planner as well as techniques for identifying equipment and space needs to facilitate the event.
Total Credits	3

Pre/Corequisites

Prerequisite	HEM 105 Sanitation and Safety
Prerequisite	HEM 110 Hospitality Math
Prerequisite	HEM 115 Introduction to the Hospitality Industry
Prerequisite	HEM 120 Hospitality Service Techniques
Prerequisite	HEM 125 Food & Beverage Management Fundamentals
Prerequisite	HEM 130 Introduction to Lodging Operations
Prerequisite	HEM 135 Hospitality Human Resource Management
Prerequisite	HEM 140 Hospitality Financial Management
Prerequisite	HEM 145 Fundamentals of Excellent Customer Service

HEM 180 Event Industry Fundamentals

Course Information

Description Overview of the event management industries. This course looks at the most up to date techniques and procedures required for producing successful and sustainable event.

Total Credits 3

Pre/Corequisites

Prerequisite HEM 105 Sanitation and Safety
Prerequisite HEM 110 Hospitality Math
Prerequisite HEM 115 Introduction to Hospitality Industry
Prerequisite HEM 120 Hospitality Service Techniques
Prerequisite HEM 125 Food & Beverage Management Fundamentals
Prerequisite HEM 130 Introduction to Lodging Operations
Prerequisite HEM 135 Hospitality Human Resource Management
Prerequisite HEM 140 Hospitality Financial Management
Prerequisite HEM 145 Fundamentals of Excellent Customer Service

HEM 185 Event and Meeting Contracting

Course Information

Description An introduction to the Meeting & Events industry where by contracts are a necessary part of doing business. This course will explore four key components which are the offer, consideration, acceptance, as well as the Banquet Event Order (BEO) or sometimes referred to as the Catering Event Order (CEO).

Total Credits 3

Pre/Corequisites

Prerequisite HEM 105 Sanitation and Safety
Prerequisite HEM 110 Hospitality Math
Prerequisite HEM 115 Introduction tot the Hospitality Industry
Prerequisite HEM 120 Hospitality Service Techniques
Prerequisite HEM 125 Food & Beverage Management Fundamentals
Prerequisite HEM 130 Introduction to Lodging Operations

Prerequisite	HEM 135 Hospitality Human Resource Management
Prerequisite	HEM 140 Hospitality Financial Management
Prerequisite	HEM 145 Fundamentals of Excellent Customer Service

HEM 190 Event Support Systems

Course Information

Description	In this course, students will examine event objectives and potential sponsorship opportunities for non-profit events as they relate to the event budget. The course will provide students with an opportunity to apply current industry software to manage attendee registration, volunteer management, audiovisual requirements, and event space management. In addition, students will produce reports of the key service providers related to attendee accommodations, transportation, ancillary activities, and post-event evaluations.
--------------------	---

Total Credits 3

Pre/Corequisites

Prerequisite	HEM 105 Sanitation and Safety
Prerequisite	HEM 110 Hospitality Math
Prerequisite	HEM 115 Introduction to Hospitality Industry
Prerequisite	HEM 120 Hospitality Service Techniques
Prerequisite	HEM 125 Food & Beverage Management Fundamentals
Prerequisite	HEM 130 Introduction to Lodging Operations
Prerequisite	HEM 135 Hospitality Human Resource Management
Prerequisite	HEM 140 Hospitality Financial Management
Prerequisite	HEM 145 Fundamentals of Excellent Customer Service

HEM 195 Special Events and Meetings

Course Information

Description In this course, students will gain hands-on experience in event planning. Students will also learn to anticipate and execute the needs of an organization or community planning special events.

Total Credits 3

Pre/Corequisites

Prerequisite HEM 105 Sanitation and Safety
Prerequisite HEM 110 Hospitality Math
Prerequisite HEM 115 Introduction to the Hospitality Industry
Prerequisite HEM 120 Hospitality Service Techniques
Prerequisite HEM 125 Food & Beverage Management Fundamentals
Prerequisite HEM 130 Introduction to Lodging Operations
Prerequisite HEM 135 Hospitality Human Resource Management
Prerequisite HEM 140 Hospitality Financial Management
Prerequisite HEM 145 Fundamentals of Excellent Customer Service

HEM 200 Event Project Planning

Course Information

Description This course provides an overview of project management as identification and explanation for the building blocks of an event from start to finish. The project triangle is introduced and demonstrates the construction of an event. Students will define the scope, create well-defined requirements, and develop work breakdown structures for an event. Task and precedence diagramming will be taught to develop the event schedule and master task list. Students will also learn to construct an event project communications plan for the purpose of communicating with internal and external stakeholders. The final portion of the course is designed to teach students to close out the function and visualize the lessons learned from the production of the event.

Total Credits 3

Pre/Corequisites

Prerequisite HEM 175 Event Catering Strategies
Prerequisite HEM 180 Event Industry Fundamentals

Prerequisite	HEM 185 Event and Meeting Contracting
Prerequisite	HEM 190 Event Support Systems
Prerequisite	HEM 195 Special Events and Meetings

HEM 205 Alcohol Beverage Law

Course Information

Description	This course will prepare students for bartending through the emphasis on ABC Laws, alcohol responsibilities, alcohol awareness, and bar setup. This course will prepare students to complete the ServSafe Alcohol certification.
Total Credits	3

Pre/Corequisites

Prerequisite	HEM 105 Sanitation and Safety
Prerequisite	HEM 110 Hospitality Math
Prerequisite	HEM 115 Introduction to the Hospitality Industry
Prerequisite	HEM 120 Hospitality Service Techniques
Prerequisite	HEM 125 Food & Beverage Management Fundamentals
Prerequisite	HEM 130 Introduction to Lodging Operations
Prerequisite	HEM 135 Hospitality Human Resource Management
Prerequisite	HEM 140 Hospitality Financial Management
Prerequisite	HEM 145 Fundamentals of Excellent Customer Service

HEM 210 Beer and Spirits

Course Information

Description	Introduction to history and methods of production for a variety of beer, spirits, and other beverages. Beverage tasting and sensory analysis; product knowledge; service techniques; sales; and alcohol service relate to the
--------------------	---

hospitality industry. Students must be 21 years old to participate in this course.

Total Credits 3

Pre/Corequisites

Prerequisite HEM 205 Alcohol Beverage Law

HEM 215 Food and Alcohol

Course Information

Description In this course, students will explore the complexity of pairing food and different types of alcohol in today's culinary world. This course will explore the significance of food and drink by examining the fundamental concepts of history, tradition, and culture. Whether planning a large catered event, developing food and wine menus for restaurants or special events, understanding how to pair food with alcohol is an invaluable skill for hospitality professionals.

Total Credits 3

Pre/Corequisites

Prerequisite HEM 205 Alcohol Beverage Law

HEM 220 Beverage Promotion

Course Information

Description This course is designed to provide the practical knowledge needed to manage a restaurant bar or beverage operation.

Total Credits 1

Pre/Corequisites

Prerequisite HEM 205 Alcohol Beverage Law

HEM 225 Wine Fundamentals

Course Information

Description Through tasting, the student will develop an appreciation of different types of wine, including varietal characteristics and other components, in order to understand the role of wine in professional food and beverage operations. Students must be 21 years of age.

Total Credits 3

Pre/Corequisites

Prerequisite HEM 205 Alcohol Beverage Law

HEM 230 Mixology

Course Information

Description Create a wide variety of classic and everyday mixed drinks in a standard bar setting. Learn about bar glassware and equipment identification, pouring techniques, common cocktail mixing methods, history of distilled spirits, origin and characteristics of various distilled spirit brands, distillation process, bartenders job description, and responsibilities, cost control, beverage pricing and responsible alcohol service.

Total Credits 4

Pre/Corequisites

Prerequisite HEM 205 Alcohol Beverage Law

HEM 235 Hospitality Management Internship

Course Information

Description This is a work-based learning course which enables students to develop practical skills, relate theory to practice, and to gain a sound base of industrial experience by working – on a paid or voluntary basis – from a range of organizations within the hospitality industry. In addition, this course seeks to develop ‘employability skills’ to assist students in progressing towards a career in hospitality.

Total Credits 4

Pre/Corequisites

Prerequisite	HEM 105 Sanitation and Safety
Prerequisite	HEM 110 Hospitality Math
Prerequisite	HEM 115 Introduction to the Hospitality Industry
Prerequisite	HEM 120 Hospitality Service Techniques
Prerequisite	HEM 125 Food & Beverage Management Fundamentals
Prerequisite	HEM 130 Introduction to Lodging Operations
Prerequisite	HEM 135 Hospitality Human Resource Management
Prerequisite	HEM 140 Hospitality Financial Management
Prerequisite	HEM 145 Fundamentals of Excellent Customer Service

HHA 100 Home Health Aide

Course Information

Description Prepares the certified nurse aide (CNA) to care for clients in community and home settings. Graduates may take the Kansas certification examination to become a home health aide (HHA).

Total Credits 2

Pre/Corequisites

Prerequisite	GRA 101 Certified Nurse Aide
--------------	------------------------------

HIS 110 United States History to 1877

Course Information

Description	This course traces development of the United States, 1492 to 1876, including English colonization, the American Revolution, formation of the Union, colonization of the West, development of sectionalism, the Civil War, and restoration of home rule in the South. Important political, cultural, economic, and religious/philosophical accomplishments of this period will be examined.
Total Credits	3

HIS 120 United States History since 1865

Course Information

Description	This course is designed to provide the student with an introduction to United States history from the end of Reconstruction to the present. This course will survey the important political, cultural, economic, and religious/philosophical accomplishments during this period.
Total Credits	3

HIS 130 World History I

Course Information

Description	This course provides an introduction to the birth and development of World History to the mid-16th century. Students will survey the important political, cultural, economic, and religious/ philosophical accomplishments of this period.
Total Credits	3

HIS 140 Humanities Prospectus

Course Information

Description This course combines humanities topics including art, religion, world history and U.S. history with the goal that students gain a greater understanding of how the humanities topics interact and impact the world around them. The course will survey world and United States history, broadly looking at politics, culture, economics, art and religious/philosophical accomplishments that have shaped our world today.

Art – gain an appreciation for art, studying the concepts and artist’s work so that students improve one’s judgment and ability to understand art critically.

Religion – Introduction to Buddhism, Christianity, Judaism, and Islam. Students will examine the basic components of each faith, as well as the historical and cultural impact of each religion

World and U.S. History – surveying world and U.S. history in the areas of politics, culture, economics, and religious/philosophical accomplishments, covering the period from the Renaissance to the 20th century.

Total Credits 3

HST 110 Introduction to Simulation

Course Information

Description This course will cover the origin of simulation and applications in healthcare training. The course will also examine and evaluate existing simulation models, programs and laboratories. This course will cover expectations, roles and responsibilities of the healthcare simulation specialist. Critical thinking and expository communication will be covered. Real life subject matter and interpersonal communication will be explored and incorporated.

Total Credits 1

HST 120 Foundations in Healthcare Simulation

Course Information

Description A detailed orientation to the purpose and function of simulation as it relates to healthcare. Detailed exploration of various healthcare provider roles and responsibilities are included. Research assignments related to healthcare practitioners, medical technology and terminology, and simulation are outlined and presented to the class. Emphasis is on gaining comfort and confidence with writing, discussing and presenting on subjects related to healthcare and healthcare simulation. Secondly, simulation center operation and management, as well as public relations are introduced. Specific topics covered include medical terminology, conceptualizing for simulation, scripting, algorithms, introductory programming and troubleshooting of manikins, introductory operation and troubleshooting of A/V systems, fundamentals of moulage and staging, 3D printing, fabricating for sim, stock, supply and inventory management, and an introduction to facilitating professional education. Assignments strengthen concepts and build confidence in presentation.

Total Credits 5

Pre/Corequisites

Prerequisite HST 110 Introduction to Simulation

HST 140 Simulating the Human Patient

Course Information

Description A strong overview of equipment utilized in healthcare training. Topics include orientation to the simulation offerings from the major robotic manikin manufacturers, specialized task trainers, moulage, and fabricating for sim. Also, disassembly, reassembly, and a detailed catalog of the construction of various types of patient simulators is required. Student's practice using the service manuals, and working with various simulator tech support. A major portion of this course focuses on electronics related to simulator operation. Students are introduced to fundamental concepts of electricity and electronics including direct current (DC), alternating current (AC), the use of digital multimeters, signal generators, oscilloscopes, primary and secondary voltage cells, Ohm's Law, the Power Law, and Kirchhoff's Voltage and Current Laws, and application of these laws to electronic circuits.

Total Credits 5

HST 210 Moulage and Staging

Course Information

Description A practical application course in scripting, preparing simulators, rooms, environments, etc. for conducting high fidelity, fully immersive simulation. Also included are camera settings, microphones and actors, multi-stage sim, mobile sim and in situ sim. Further, recording and debriefing, marking video and recording student metrics. Finally, breaking down the sim, caring for equipment post-sim, and billing appropriately for materials and equipment, personnel, and depreciation. Training of standardized patients is introduced. Key feature is a semester project that includes developing a simulation from scratch, and then running and debriefing that simulation at the end of the term.

Total Credits 5

Pre/Corequisites

Corequisite	HST 220 Operation and Maintenance
Corequisite	HST 230 Simulation Center Management, Education and Research
Prerequisite	HST 120 Foundations in Healthcare Simulation

HST 220 Operation and Maintenance

Course Information

Description A detailed course on equipment utilization across the sim spectrum. Specialty applications, advanced troubleshooting techniques, and management of health and safety related expectations in both hospital based, and academic simulation programs, are explored in depth.

Total Credits 5

Pre/Corequisites

Corequisite	HST 210 Moulage and Staging
Corequisite	HST 230 Simulation Center Management, Education and Research
Prerequisite	HST 120 Foundations in Healthcare Simulation

HST 230 Simulation Center Management, Education and Research

Course Information

Description	The course builds upon concepts related to equipment maintenance, warranties, cycling, and depreciation. Equipment integration, budgeting and billing for simulation, personnel management, staffing, grant funding, and non-profit entities are explored. Various educational models are examined with emphasis on transformative learning. Research opportunities are discussed in relation to simulation center applications and utilization.
--------------------	--

Total Credits 2

Pre/Corequisites

Corequisite	HST 210 Moulage and Staging
Corequisite	HST 220 Operation and Maintenance
Prerequisite	HST 120 Foundations in Healthcare Simulation

HST 240 Clinical Internship In Healthcare Simulation

Course Information

Description	Students will complete a minimum of a 6 week clinical rotation in healthcare simulation. Students will also review for the CHSOS exam and journal their clinical experience.
--------------------	--

Total Credits 6

Pre/Corequisites

Prerequisite	HST 210 Moulage and Staging
--------------	-----------------------------

IND 104 Drafting for Industrial Maintenance

Course Information

Description	This course is designed to provide a basic understanding of machine blueprints and the ability to freehand sketch machine parts as needed on the plant floor.
Total Credits	1

IND 105 Industrial Automation Test Equipment

Course Information

Description	This course is designed to provide students with the necessary skills to operate the test equipment used in the Industrial Automation program. In a hands on environment students will learn the function and operating processes of each piece of equipment. Topics will include digital multi meters, oscilloscopes, and function generators.
Total Credits	3

Pre/Corequisites

Prerequisite	AVC 110 OSHA Safety OR IND 100 Industrial Safety Procedures/OSHA 10
--------------	---

IND 106 Direct & Alternating Current

Course Information

Description	This course introduces direct current (DC) concepts and applications and the theory and application of varying sense wave voltages and current. Topics include: electrical principles and laws; batteries; DC test equipment; series, parallel and simple combination circuits; magnetism, AC wave generation, AC test equipment, inductance, capacitance, and basic transformers, and laboratory procedures and safety practices.
--------------------	--

Total Credits 4

Pre/Corequisites

Prerequisite AVC 110 Safety/OSHA

IND 108 Industrial Wiring

Course Information

Description This course teaches the fundamental concepts of industrial wiring with an emphasis on installation procedures. Topics include: grounding, raceways, three-phase systems, transformers (three-phase and single-phase), wire sizing, overcurrent protection, NEC requirements, industrial lighting systems, and switches, receptacles, and cord connectors.

Total Credits 2

Pre/Corequisites

Prerequisite IND 106 Direct and Alternating Current

IND 109 Basic Industrial Programmable Logic Controls

Course Information

Description This course introduces operational theory, systems terminology, PLC installations, and programming procedures for programmable logic controls. Emphasis is placed on PLC programming, connections, installations, and start-up procedures. Topics include: PLC hardware and software, PLC functions and terminology, PLC installation and set up, PLC programming basics, relay logic instructions, timers and counters, connecting field devices to I/O cards, and PLC safety procedures.

Total Credits 4

IND 110 DC & AC Motors

Course Information

Description	This course introduces the fundamental theories and applications of single-phase and three-phase motors. Topics include: motor theory and operating principles, motor terminology, motor identification, NEMA standards, AC motors, DC motors, scheduled preventive maintenance, and troubleshooting and failure analysis.
Total Credits	1

Pre/Corequisites

Prerequisite	IND 108 Industrial Wiring
--------------	---------------------------

IND 111 Foundations of Manufacturing

Course Information

Description	This course is designed to teach students the non-technical side of manufacturing that helps them to know where they fit into the value chain and how their performance affects the company, and to understand how and why decisions are made. Soft skills, proper selection and use of maintenance tools, safety, differences in maintenance practices will be introduced.
Total Credits	3

IND 112 Fundamentals of Motor Control

Course Information

Description	This course introduces the fundamental concepts, principles, and devices involved in industrial motor control. Emphasis is placed on developing a theoretical foundation of industrial motor control devices. Topics include:
--------------------	---

principles of motor control, control devices, symbols and schematic diagrams.

Total Credits 2

Pre/Corequisites

Prerequisite IND 110 DC and AC Motors

IND 113 Solid State & Digital Devices

Course Information

Description This course introduces the physical characteristics and applications of solid state devices and digital circuits. Topics include: introduction to semiconductor fundamentals, diode applications, basic transistor fundamentals, basic amplifiers, and semiconductor switching devices, digital devices, arithmetic circuits and conversion from analog to digital and digital to analog.

Total Credits 3

Pre/Corequisites

Prerequisite IND 106 Direct and Alternating Current

IND 114 Magnetic Starters & Braking

Course Information

Description This course provides instruction in wiring motor control circuits. Emphasis is placed on designing and installing magnetic starters in across-the-line, reversing, jogging circuits, and motor braking. Topics include: control transformers, full voltage starters, reversing circuits, jogging circuits, and braking.

Total Credits 2

Pre/Corequisites

Prerequisite IND 112 Fundamentals of Motor Control

IND 116 Advanced Motor Controls

Course Information

Description	This course provides instruction in two-wire motor control circuits using relays, contractors, and motor starts with application sending devices. Topics include: wiring limit switches, wiring pressure switches, wiring float switches, wiring temperature switches, wiring proximity switches, wiring photo switches, sequencing circuits, reduced voltage starting, motor control centers, and troubleshooting.
Total Credits	3

IND 117 Variable Speed Motor Control

Course Information

Description	This course provides instruction in the fundamentals of variable speed drives, industrial motors, and other applications of variable speed drives. Topics include: fundamentals of variable speed control, AC frequency drives, DC variable speed drives, installation procedures, and ranges.
Total Credits	3

Pre/Corequisites

Prerequisite	IND 116 Advanced Motor Controls
--------------	---------------------------------

IND 121 Mechanical Systems Reliability

Course Information

Description	This course provides understanding of mechanical energy transmission concepts along with lab experience to operate, install, analyze performance, and design mechanical drive systems using right angle gears, bearings and couplings. Students learn how to setup and operate laser shaft
--------------------	--

alignment and apply vibration analysis to various power transmission systems.

Total Credits 3

Pre/Corequisites

Prerequisite IND 117 Variable Speed Motor Control

IND 123 Industrial Fluid Power

Course Information

Description This course provides instruction in fundamental concepts and theories for safely operating hydraulic components and pneumatic systems and industrial pumps and piping systems. Topics include: hydraulic theory, suction side of pumps, actuators, valves, pumps/motors, accumulators, symbols and circuitry, fluids, filters, pneumatic theory, compressors, pneumatic valves, air motors and cylinders, pump identification; pump operation; pump installation, maintenance, and troubleshooting; piping systems; and installation of piping systems.

Total Credits 4

Pre/Corequisites

Prerequisite IND 130 Mechanical Systems

IND 124 Precision Measuring and Motion Control

Course Information

Description In this course students will learn how to identify, inspect, check calibration, and utilize precision measuring instruments in maintenance applications. Students will also study motion control systems. This course will teach the student how to install, program, and troubleshoot motion control systems.

Total Credits 3

Pre/Corequisites

Prerequisite IND 117 Variable Speed Motor Control

IND 130 Mechanical Systems

Course Information

Description This course provides instruction in basic physics concepts applicable to mechanics of industrial production equipment, teaches basic industrial application of mechanical principles with emphasis on power transmission and specific mechanical components. Students will also design basic mechanical transmission systems using chains, v-belts and gears.

Total Credits 3

Pre/Corequisites

Prerequisite IND 121 Mechanical Systems Reliability

IND 131 Industrial Programmable Logic Controls (PLC)

Course Information

Description This course examines types, installation and troubleshooting of programmable logic controllers (PLC). Hardware and programming aspects, as well as ladder logic symbols and operations necessary to develop a PLC program are covered in this course.

Total Credits 3

Pre/Corequisites

Prerequisite IND109 Basic Industrial Programmable Logic Controls

IND 132 Industrial Process Control

Course Information

Description	This course provides understanding of different types of process control systems like temperature, flow and level control. The course includes process control principles, thermocouples, RTD's, temperature measurement devices, ON/Off temperature controlled, programmable process heat controllers, transmitters, process loop test and operate system found in industrial application.
Total Credits	3

Pre/Corequisites

Prerequisite	IND 131 Industrial Programmable Logic Controls
--------------	--

IND 135 Industrial Automation Capstone

Course Information

Description	In this course students will have the opportunity to link classroom/lab theory with a capstone learning opportunity. Through hands on application, reflection and evaluations students will demonstrate integrated knowledge and growth in the field of industrial automation. Students will produce a critical reflection on their capstone experience demonstrating how they have addressed specific learning goals.
Total Credits	4

IND 136 Industrial Automation Internship

Course Information

Description	In this course students will have the opportunity to link classroom/lab theory with an experimental learning opportunity. Through direct observation, reflection and evaluation, students gain an understanding of the internship site's work, mission, and customers, how these relate to their program of study, as well as the organization's position in the broader industry or field. Students will produce a critical reflection on their internship experience demonstrating how they have addressed specific learning goals.
Total Credits	4

IND 139 CNC Operation for Maintenance Applications

Course Information

Description This course will train the student in the basic manual operation of CNC Machine tools. It will cover the required programming codes to move the machine using Manual Data Input (MDI), as well as hand and jog functions. It is designed to teach the student how to manipulate the machine to perform maintenance, troubleshooting, and repair operations.

Total Credits 3

Pre/Corequisites

Prerequisite IND 123 Industrial Fluid Power

Prerequisite IND 131 Industrial Programmable Logic Controls (PLC)

IND 140 Basic Metrology

Course Information

Description In this course students will learn about the equipment, techniques, and skills used to perform precision alignment required to return machinery to OEM specifications. This course requires working knowledge of axis of movement, various machine tool programming codes, understanding of tolerance, and basic machine geometry.

Total Credits 1

Pre/Corequisites

Corequisite IND 139 CNC Operations for Maintenance Applications

IND 145 Advanced Technologies in Predictive Maintenance

Course Information

Description	Addresses regular routine predictive, testing, checking for wear and tear and eventually replacing components to avoid breakdown. Introduces students to the various types and styles of predictive maintenance components, principles, and practices used in industrial applications.
Total Credits	3

INF 105 A+ Certification - Essentials

Course Information

Description	This course will prepare the student for entry level work in the Information Technology career field. Successful students will have the skills necessary for installing, maintaining, configuring, and upgrading PC (Personal Computer) workstations. Students will utilize troubleshooting techniques and tools to effectively and efficiently resolve PC, OS, and network connectivity issues and implement security practices. Job titles in some organizations that would describe the role of this individual may be: Enterprise technician, IT administrator, field service technician, PC or support technician etc.
Total Credits	3

INF 110 A+ Certification - Application

Course Information

Description	This course will prepare the student for entry level work in the Information Technology career field. Successful students will have the knowledge required to understand the fundamentals of computer technology, networking and security, and will have the skills required to identify hardware, peripheral, networking, and security components. Upon completion of the course students will understand the basic functionality of the operating system and basic troubleshooting methodology, practice proper safety procedures, and will effectively interact with customers and peers.
Total Credits	3

Pre/Corequisites

Prerequisite INF105 A+ Certification -Essentials

INF 112 Network Essentials

Course Information

Description This course teaches the fundamentals of networking. It covers how devices communicate on a network, network addressing and network services, how to build a home network and configure basic security, the basics of configuring Cisco devices, and testing and troubleshooting network problems.

Total Credits 3

Pre/Corequisites

Prerequisite INF 110 A+ Certification - Application

INF 113 Introduction to Programming

Course Information

Description Programmers are in higher demand today than ever before. Get the essential skills and tools to become a successful software engineer and learn the fundamental concepts and practices that are critical to the task of coding—no matter what language you choose. In this course, students will develop the knowledge to begin programming in any language, connect programming theory to practice in real-life scenarios, and apply best practices from experts in the field.

Total Credits 3

INF 115 Network+ Part I

Course Information

Description	This course prepares a student for entry level installing, maintaining, troubleshooting, and repairing a computer network.
Total Credits	3

Pre/Corequisites

Prerequisite	INF 112 Network Essentials
--------------	----------------------------

INF 116 Network+ Part II

Course Information

Description	This is a continuation of INF 115 Networking Part 1. This class prepares students to work with network operating systems and network design issues.
Total Credits	3

Pre/Corequisites

Prerequisite	INF115 Network+ Part I
--------------	------------------------

INF 118 Cloud Fundamentals

Course Information

Description	This course covers cloud services from a business perspective. This includes the business value of cloud computing, cloud types, steps to a successful adoption of the cloud, impact and changes on IT service management, as well as risks and consequences.
Total Credits	3

INF 120 Security+

Course Information

Description This course prepares students for the CompTIA Security+ Certification exam. CompTIA Security+ is a global certification that validates the baseline skills needed to perform core security functions and pursue an IT security career. The Security+ course focuses on the latest trends and techniques in risk management, risk mitigation, threat management, and intrusion detection. The Security+ course provides students with the knowledge and skills required to assess an enterprise environment's security posture, recommend and implement appropriate security solutions, and monitor and secure hybrid environments, including cloud, mobile, and IoT. In this course, students will learn to operate with an awareness of applicable laws and policies, including principles of governance, risk management, and compliance, while identifying, analyzing, and responding to security events and incidents. This course prepares the student for a System Administrator, Network Administrator, Security Administrator, Junior IT Auditor/Penetration Tester, Security Specialist, Security Consultant or Security Engineer.

Total Credits 3

Pre/Corequisites

Prerequisite INF 116 Network+ Part II

INF 121 Object-Oriented Programming (JavaScript)

Course Information

Description JavaScript is a scripting language of the web. As the web evolves from a static to a dynamic environment, technology focus is shifting from static markup and styling—frequently handled by content management systems or automated scripts—to dynamic interfaces and advanced interaction. Once seen as optional, JavaScript is now becoming an integral part of the web, infusing every layer with its script. Object-Oriented Programming (OOP) refers to using self-contained pieces of code to develop applications. IT professionals call these self-contained pieces of code objects, better known as Classes in most OOP programming languages and Functions in JavaScript. IT professionals use objects as building blocks for our applications. Building applications with objects allows us to adopt some valuable techniques. In this course students will build their understanding of JavaScript piece by piece, from core principles like variables, data types, conditionals, and functions through advanced topics including loops, closures, DOM printing, and learn Inheritance and Encapsulation since only these two concepts apply to OOP in JavaScript; in JavaScript objects can

encapsulate functionalities and inherit methods and properties from other objects.

Total Credits 3

Pre/Corequisites

Prerequisite INF 113 Introduction to Programming

INF 122 Introduction to Web Development

Course Information

Description This course introduces students to basic web design using HTML (Hypertext Markup Language), CSS (Cascading Style Sheets), JavaScript, and PHP. Throughout the course students are introduced to planning and designing effective websites; implementing web pages by writing code; producing a functional, multi-page website; and navigating how to choose and set up a server to host their sites on. The course does not require any prior knowledge of coding or web design.

Total Credits 3

INF 126 Test Driven Development (JavaScript)

Course Information

Description Programmers shouldn't have to guess whether the software is working correctly. They should be able to prove it, every step of the way. A formal test-driven development (TDD) process allows programmers to build testing into their daily routine. They can run tests many times a day, getting instant feedback on the quality of the code. This course explains how to adopt a TDD mindset and process—vital skills for all modern software developers. Find out what makes a good test, why programmers should be more interested in failure than success, and how to measure and repeatedly run tests. Together students will explore the jargon: test suites, test harnesses, mock and stub objects, and more, how TDD is used in the most common programming languages, TDD environments, and what tools/frameworks exist to help programmers succeed.

Total Credits 3

Pre/Corequisites

Prerequisite INF 121 Object-Oriented Programming

INF 127 Linux+ Part I

Course Information

Description This course is the first of two courses to help prepare the student for the CompTIA Linux+ Certification exam. The first course covers the history of Linux, basics of how to install Linux, navigate and manage the file system, how to navigate the command line, and writing scripts in the BASH shell. The new CompTIA Linux+ certification is for the IT pro who will use Linux to manage everything from cars and smartphones to servers and supercomputers, as a vast number of enterprises use Linux in cloud, cybersecurity, mobile and web administration applications. The course prepares IT professionals with hands-on experience configuring, monitoring, and supporting servers running the Linux operating system. The course focuses on security, kernel modules, storage and virtualization, device management at an enterprise level, git & automation, networking & firewalls, server side and command line, server (vs. client-based) coverage, troubleshooting and security-enhanced Linux (SELinux).

Total Credits 3

Pre/Corequisites

Prerequisite INF 110 A+ Certification - Application

Prerequisite INF 116 Network+ Part II

INF 128 Linux+ Part II

Course Information

Description This is the second course in a series of two courses to help prepare the student for the CompTIA Linux+ Certification exam. The second course covers how to install a Graphic User Interface (GUI), X Windows, how to manage Linux processes, printer administration, how to compress and uncompress files, how to configure a network services and how to troubleshoot common Linux problems. The new CompTIA Linux+ is for the

IT pro who will use Linux to manage everything from cars and smartphones to servers and supercomputers, as a vast number of enterprises use Linux in cloud, cybersecurity, mobile and web administration applications. The course prepares IT professionals with hands-on experience configuring, monitoring, and supporting servers running the Linux operating system. The course focuses on security, kernel modules, storage and virtualization, device management at an enterprise level, git & automation, networking & firewalls, server side and command line, server (vs. client-based) coverage, troubleshooting and security-enhanced Linux (SELinux).

Total Credits 3

Pre/Corequisites

Prerequisite	INF 110 A+ Certification- Application
Prerequisite	INF 116 Network + Part II
Prerequisite	INF 127 Linux+ Part I

INF 131 Continuous Integration Continuous Deployment - CICD

Course Information

Description	Continuous delivery (CD) answers two difficult questions: "How do we release software more quickly in response to user demand?" and "How do we release high-quality software reliably?" Using special practices and tools, teams can address both concerns. In this course, learn about continuous integration and continuous delivery (CI/CD), and see how these concepts work in practice by constructing your own build pipeline. Throughout the course, students will discuss elements of the pipeline as they show how to take an app written in the Go programming language from development to production. Students will walk through version control, building artifacts, unit testing, and deployment, demonstrating common practices and tools along the way.
--------------------	---

Total Credits 3

Pre/Corequisites

Prerequisite	INF 121 Object-Oriented Programming (JavaScript) Or
Prerequisite	INF XXX Object- Oriented Programming (Python)

INF 134 Server

Course Information

Description This course prepares students for the CompTIA Server+ Certification exam. This course is vendor neutral and works with Microsoft Windows Server Operating Systems, Linux Open Source Operating Systems, and VMware virtualization products. This course covers the basics from how the hardware and operating systems works to more advanced concepts of RAID, virtualization, security, network storage, building domain controllers for an enterprise environment, managing users, groups, and permissions and troubleshooting. The course prepares students to work in a wide variety of jobs such as System Administrators, Webserver administrators, virtualization, and cloud administrator roles.

Total Credits 3

Pre/Corequisites

Prerequisite INF 110 A+ Certification-Application

INF 136 Introduction to PowerShell

Course Information

Description Introduction to PowerShell provides an overview and application of the next generation command shell developed by Microsoft. Students learn to interact with Windows PowerShell from the command line. This course prepares students to demonstrate an understanding and application of the fundamentals of how to develop and execute PowerShell scripts, and how to become an effective programmer in the PowerShell environment.

Total Credits 3

Pre/Corequisites

Prerequisite INF 116 Network + Part II

INF 138 Object-Oriented Programming (Python)

Course Information

Description	Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together. Python's simple, easy to learn syntax emphasizes readability and therefore reduces the cost of program maintenance. Python supports modules and packages, which encourages program modularity, object oriented application, and code reuse. Object Oriented Programming (OOP) refers to using self-contained pieces of code to develop applications. IT Professionals call these self-contained pieces of code objects, better known as Classes in Python. IT Professionals use objects as building blocks for scripting and applications which allows us to adopt some valuable techniques. In this course students will build their understanding of Python piece by piece starting with the basics and work into algorithms, standard libraries, GUI development, and generators. At the end of this course students will be fully proficient in python having covered advanced python development as well as parallel and concurrent programming.
Total Credits	3

Pre/Corequisites

Prerequisite	INF 113 Introduction to Programming
--------------	-------------------------------------

INF 141 Test Driven Development (Python)

Course Information

Description	Programmers shouldn't have to guess whether software is working correctly. They should be able to prove it, every step of the way. A formal test-driven development (TDD) process allows programmers to build testing into their daily routine. Programmers can run tests many times a day, getting instant feedback on the quality of their code. This course explains how to adopt a TDD mindset and process—vital skills for all modern software developers. Find out what makes a good test, why programmers should be more interested in failure than success, and how to measure and repeatedly run tests. In this course students will get an overview of both unit testing and TDD, why both are crucial for developers, how to set up a development environment for TDD, and go into detail with the pytest unit-
--------------------	--

testing framework. In addition too, students will learn best practices and develop test cases in order to master TDD in Python.

Total Credits 3

Pre/Corequisites

Prerequisite INF 138 Object Oriented Programming (Python) or

Prerequisite INF 121 Object-Oriented Programming (JavaScript)

INF 142 Introduction to Storage Solutions

Course Information

Description This course prepares student to maintain and optimize cloud infrastructure. Students will develop the diversity of knowledge, skill, and abilities required of system administrators to effectively perform in data center jobs. This class is vendor neutral covering Amazon AWS, Microsoft Azure, and Google Cloud Services. It prepares students to work in a wide variety of jobs such as System Administrators, Webserver administrators, virtualization, and cloud administrator roles.

Total Credits 3

Pre/Corequisites

Prerequisite INF 110 A+ Certification - Application

INF 143 Web Application Development I (HTML/CSS)

Course Information

Description CSS is a stylesheet language that allows you to control the appearance of your webpages, and HTML is the programming language that powers the web. Like any language, once you master it, you can begin to create your own content, whether that's simple websites or complex web applications. In this hands-on course, we will take an in-depth look at the syntax of HTML and best practices for writing with CSS and JavaScript to create rich, engaging user experiences. Plus, at the end of the course, you'll walk away with an actual project—an online résumé page.

Total Credits 3

Pre/Corequisites

Prerequisite	INF 126 Test-Driven Development (JavaScript)
Prerequisite	INF 122 Introduction to Web Development

INF 147 Website Production & Management

Course Information

Description	This course is designed to teach students the necessary skills to build, customize, manage and promote a business website using the content management system WordPress. In this project-based course, students will apply classroom knowledge and skills to successfully launch a site on a live web server.
Total Credits	3

INF 148 Computer Support Specialist Capstone Experience

Course Information

Description	The capstone course is designed to serve as a summative evaluation of the student's skills and abilities. The student is given the opportunity to demonstrate integrated knowledge and growth in the area of computer support. The course assesses student's cognitive, affective, and psychomotor learning in the program and offers the opportunity to apply employability skills (soft skills) relevant to customer service and work ethic. The course requires the student to design and implement a unique project that incorporates all of the program level outcomes. Additionally, the student will present their project to representatives from WATC faculty in the technical program. The project itself can serve as a portfolio artifact to present to potential employers.
Total Credits	1

Pre/Corequisites

Prerequisite	INF 142 Introduction to Storage Solutions
--------------	---

INF 152 Web Application Development II (REACT)

Course Information

Description React is a JavaScript library for building user interfaces to fetch rapidly changing data that needs to be recorded and is maintained by Facebook for the development of single-page or mobile applications. The effectiveness of [React.js](#) stands out. It relies on reusable components, not templates, for UI development, allowing developers to render views where data changes over time. React applications are more scalable, maintainable, and makes developers more efficient. In this hands-on course, you will learn [React.js](#) and grow your skills through several browser-based projects leading to the completion of several web applications.

Total Credits 3

Pre/Corequisites

Prerequisite INF 143 Web Application Development I (HTML/CSS)

INF 153 Multi-Cloud Administration

Course Information

Description Cloud administrators must have an understanding of cloud services and architecture, as well as the top cloud platforms and tools. In this hands-on course, students will explore the top cloud platforms, AWS, Azure, and Google Cloud, as well as best practices in cloud security, operations, and services in order to obtain the skills needed to become a successful multi-cloud administrator.

Total Credits 3

Pre/Corequisites

Prerequisite INF 118 Cloud Fundamentals

INF 155 Digital Forensics

Course Information

Description	Digital forensics is a branch of forensic science surrounding the recovery and investigation of material found in digital devices, often in relation to computer crime. This course introduces students to the basic concepts associated with digital forensics. Topics will include forensic processes, forensic tools, and digital evidence controls.
Total Credits	3

Pre/Corequisites

Corequisite	INF 110 A+ Certification - Application
-------------	--

INF 156 Advanced Web Development (PHP)

Course Information

Description	This course is designed to provide students with advanced skills in the area of Web Development. In this hands on class students will have the opportunity to apply HTML5, CSS3, and jQuery with PHP concepts to lab projects. Topics will include PHP programming , basic database functionality, and building dynamic applications. .
Total Credits	3

INF 157 Cyber Law and Ethics

Course Information

Description	Provide students with an overview of the common laws and ethical issues associated with information technology. The course uses a case study approach to encourage the student in developing analytical, problem-solving, critical thinking and decision-making skills.
Total Credits	3

INF 158 Multi-Cloud Development Services

Course Information

Description Cloud computing impacts all careers, and an awareness of the opportunities associated with this emerging field is critical. Developers need to understand what it means to develop on and migrate to the cloud—and comprehend the overall landscape before diving into the platform. In this hands-on course, you will get a high-level overview just for developers, focusing on the features and services in a multi-cloud development environment using Google Cloud, Amazon Web Services, and Microsoft Azure.

Total Credits 3

Pre/Corequisites

Prerequisite INF 118 Cloud Fundamentals
Prerequisite INF 121 Object- Oriented Programming(JavaScript) or
Prerequisite INF 138 Object-Oriented Programming(Python)

INF 160 Server Security

Course Information

Description Server Security is designed to provide the students with concepts to develop, deploy, and maintain reliable and secure servers. Topics will include SSH keys, Firewalls, PKI systems, SSL and TLS encryption, service and file auditing.

Total Credits 3

Pre/Corequisites

Prerequisite INF 134 Server+

INF 161 Introduction to Networks

Course Information

Description	Begin preparing for a networking career with this introduction to how networks operate. This first course in the 3-course CCNA series introduces architectures, models, protocols, and networking elements – functions needed to support the operations and priorities of Fortune 500 companies and small innovative retailers. Students will have the chance to build simple local area networks (LANs). Upon completion of the course students will have a working knowledge of IP addressing schemes, foundational network security, and be able to perform basic configurations for routers and switches. Introduction to Networks (ITN) covers the architecture, structure, functions and components of the Internet and other computer networks. Students achieve a basic understanding of how networks operate and how to build simple local area networks (LAN), perform basic configurations for routers and switches, and implement Internet Protocol (IP).
Total Credits	3

INF 162 Cisco Internetworking Part I

Course Information

Description	The Interconnecting Cisco Networking Devices Part 1 (ICND1) will cover the knowledge and skills related to network fundamentals, LAN switching technologies, routing technologies, infrastructure services, and infrastructure maintenance.
Total Credits	3

INF 163 Cisco Internetworking Part II

Course Information

Description	The Interconnecting Cisco Networking Devices Part 2 will cover the knowledge and skills related to LAN switching technologies, IPv4 and IPv6 routing technologies, WAN technologies, infrastructure services, and infrastructure maintenance.
Total Credits	3

Pre/Corequisites

Prerequisite	INF 162 Cisco Internetworking Part 1
--------------	--------------------------------------

INF 164 Switching, Routing, and Wireless Essentials

Course Information

Description Delve further into the world of networking with the second CCNA course in a 3-course series. This course focuses on switching technologies and router operations that support small-to-medium business networks, including wireless local area networks (WLAN) and security concepts. Students will perform basic network configuration and troubleshooting, identify and mitigate LAN security threats, and configure and secure a basic WLAN. CCNAv7: Switching, Routing, and Wireless Essentials (SRWE) covers the architecture, components, and operations of routers and switches in small networks and introduces wireless local area networks (WLAN) and security concepts. Students learn how to configure and troubleshoot routers and switches for advanced functionality using security best practices and resolve common issues with protocols in both IPv4 and IPv6 networks.

Total Credits 3

Pre/Corequisites

Prerequisite INF 161 Introduction to Networks

INF 165 Advanced Cyber Security

Course Information

Description Advanced Cyber Security is designed to enhance students knowledge of security practices. The course will cover a range of topics that are vital for securing modern enterprises. Topics will include plans and policies, enterprise roles, security metrics, risk management, standards and regulations, physical security and business endurance.

Total Credits 3

Pre/Corequisites

Prerequisite INF 120 Security+

INF 166 Cloud Application Development I (REACT on AWS)

Course Information

Description Traditionally, companies have built and deployed web applications where they have some degree of control typically running on a server and are responsible for provisioning and managing the resources for it. The issues associated with this process, including server uptime, maintenance costs, managing security, and scalability is driving the realization that it is more competitive to run applications on the cloud. In this hands-on course, designed for developers that would like to build full-stack applications on Amazon Web Services, students will make a full-stack React application by creating a note-taking app from scratch. By guiding students, step-by-step through both the frontend and the backend, students will cover all the different aspects of building their first full-stack React app on the cloud.

Total Credits 3

Pre/Corequisites

Prerequisite INF 152 Web Application Development - II
Prerequisite INF 118 Cloud Fundamentals

INF 167 Enterprise Networking, Security, and Automation

Course Information

Description Large enterprises depend heavily on the smooth operation of their network infrastructures. The third course in the 3-course CCNA series describes the architectures and considerations related to designing, securing, operating, and troubleshooting enterprise networks. It covers wide area network (WAN) technologies and quality of service (QoS) mechanisms used for secure remote access along with the introduction of software-defined networking, virtualization, and automation concepts that support the digitalization of networks. CCNAv7: Enterprise Networking, Security, and Automation (ENSA) describes the architecture, components, operations, and security to scale for large, complex networks, including wide area network (WAN) technologies. The course emphasizes network security

concepts and introduces network virtualization and automation. Students learn how to configure, troubleshoot, and secure enterprise network devices and understand how application programming interfaces (API) and configuration management tools enable network automation.

Total Credits 3

Pre/Corequisites

Prerequisite INF 164 Switching, Routing, and Wireless Essentials

INF 168 AWS Cloud Practitioner

Course Information

Description To date, when it comes to market share Amazon Web Services currently holds 47.8%, followed by Microsoft Azure at 15.5%, Alibaba Cloud at 7.7%, Google at 4%, and IMB at 1.8%. Get up to speed with one of the most popular and powerful cloud solutions on the market—Amazon Web Services (AWS). In this hands-on course, students will deepen their understanding of Amazon Web Services (AWS) through enterprise security, high availability, controlling cost, and preparing an AWS solution.

Total Credits 3

Pre/Corequisites

Prerequisite INF 153 Multi-Cloud Administration Or

Prerequisite INF 118 Cloud Fundamentals

INF 169 Machine Learning and AI Foundations with Predictive Analytics

Course Information

Description There is a lot to learn to stay on top of a rapidly expanding universe of AI and machine learning. In addition, predictive analytics is one of the richest disciplines within the realm of data science; together artificial intelligence, machine learning, and predictive analytics form a very lucrative skillset for an ever-increasing competitive market. In this hands-on course, students will be exposed to a healthy range of topics to learn and advance their

skillset in AI, ML, and data science. In addition too, students will learn the tools and techniques for using data to predict future outcomes in order to get up to date with the latest advancements

Total Credits 3

Pre/Corequisites

Prerequisite INF 138 Object-Oriented Programming (Python)

INF 170 Cloud Application Development II (Serverless REACT on AWS)

Course Information

Description Traditionally companies have built and deployed web applications where they have some degree of control typically running on a server and are responsible for provisioning and managing the resources for it. There are a few issues with this be it server uptime, maintenance costs, managing security, and scalability. It is far more competitive now to run applications on the cloud. Serverless computing (or serverless for short), is an execution model where the cloud provider (AWS, Azure, or Google Cloud) is responsible for executing a piece of code by dynamically allocating the resources. And only charging for the amount of resources used to run the code. The code that is sent to the cloud provider for execution is usually in the form of a function. Hence serverless is sometimes referred to as “Functions as a Service” or “FaaS”. This hands-on course is meant for developers that would like to build full-stack serverless applications. By guiding students step-by-step through both the frontend and the backend they will cover all the different aspects of building their first full automated full-stack serverless React app on the cloud.

Total Credits 3

Pre/Corequisites

Prerequisite INF 166 Cloud Application Development I

INF 174 Information Technology Capstone

Course Information

Description	In this course students, will have the opportunity to link classroom/lab theory with a capstone learning opportunity. Through hands on application, reflection and evaluations, students will demonstrate integrated knowledge and growth in the field of information technology. Students will produce a critical reflection on their capstone experience demonstrating how they have addressed specific learning goals.
Total Credits	3

Pre/Corequisites

Corequisite INF 120 Security +

INF 175 Information Technology Internship

Course Information

Description	In this course, students will have the opportunity to link classroom/lab theory with an experimental learning opportunity. Through direct observation, reflection and evaluation, students gain an understanding of the internship site's work, mission, and customers, how these relate to their program of study, as well as the organization's position in the broader industry or field. Students will produce a critical reflection on their internship experience demonstrating how they have addressed specific learning goals.
Total Credits	3

Pre/Corequisites

Corequisite INF 120 Security +

INF 177 AWS Solutions Architect Associate

Course Information

Description	AWS certification is one of the most in-demand in the market, as it allows students to demonstrate proficiency in working with AWS cloud services. This hands-on course provides IT professionals who have an existing foundational knowledge of the AWS platform to learn the skills they need
--------------------	---

to prepare for the AWS Certified Solutions Architect (Associate) exam. By completing this course students will be thoroughly prepared to lock down their AWS skills for the AWS Certified Solutions Architect – Associate (SAA-C01) exam.

Total Credits 3

Pre/Corequisites

Prerequisite INF 168 AWS Cloud Practitioner

INF 180 Advanced Network Security

Course Information

Description Advanced Network Security is designed to provide the student advanced concepts in network security including defending the network. Topics will include configuring network appliances, defending against unauthorized access, misuse, modification, or denial of network resources.

Total Credits 3

Pre/Corequisites

Prerequisite INF 165 Advanced Cyber Security

INF 182 Microsoft Azure Administrator

Course Information

Description Microsoft Azure is one of the leading enterprise-grade cloud computing platforms. In this hands-on course, students will be introduced to cloud computing focusing on various Azure technologies designed to support and protect companies at scale. As a more efficient alternative to traditional on-premise IT infrastructure, through this course, students will learn how to build a base of operations with Azure resource groups, configure networking, provision storage, manage active directory, implement security, govern identity and access management, and much more.

Total Credits 3

Pre/Corequisites

Prerequisite INF 153 Multi-Cloud Administration

INF 185 Virtual Private Cloud Administration

Course Information

Description Most leading private clouds provide similar features. So, how can IT professionals select the right solution with intent to scale for an organization? Through this hands-on course, students will examine industry-leading private cloud platforms and compare the services offered. Learn the fundamentals of cloud computing using a private cloud, consider reasons why you might choose a private cloud solution for a business, and discover the features and services offered by several providers—from security to integration and compatibility features.

Total Credits 3

Pre/Corequisites

Prerequisite INF 153 Multi-Cloud Administration

INF 187 Cloud Native Infrastructure (Kubernetes)

Course Information

Description Container technology caught the public's attention with the introduction of Docker in 2013. The efficiency and cost benefits containerization can offer quickly made it one of the hottest topics in cloud computing. Shortly after Docker's release, there has been a flood of new container management platforms, aiming to reduce the complexity of managing containerized applications. One of these platforms, the open-source project Kubernetes created by Google in 2015, is by now the de facto standard for container management. In this hands-on course, students will learn the ins and outs of Kubernetes, how it automates deploying, scaling and managing containerized applications on a group (cluster) of (bare metal or virtual) servers.

Total Credits 3

Pre/Corequisites

Prerequisite INF 153 Multi-Cloud Administration

INF 188 Cloud Data and DevOps Specialist (AWS)

Course Information

Description Amazon Web Services (AWS) is one of the most widely used cloud platforms and the go-to for many organizations looking to reduce costs by adopting a cloud infrastructure strategy. In this hands-on course, students will gain a comprehensive, cohesive skill for data admins, engineers, and DevOps specialists who will use AWS with data science and business analytics teams. Topics include cloud concepts, best practices, resilient infrastructure, elasticity, automation, cost optimization, server-based architectures, data science, metrics, and much more.

Total Credits 3

Pre/Corequisites

Prerequisite INF 118 Cloud Fundamentals

INF 191 Microsoft Enterprise O365 Administration

Course Information

Description Microsoft 365 offers enterprises a complete business solution around cloud-based office services, applications, Windows 10, and mobility and security services. In this hands-on course, students will dive into each Microsoft 365 product, providing IT professionals with the guidance they need to successfully implement and manage solutions for the modern workplace.

Total Credits 3

Pre/Corequisites

Prerequisite INF 153 Multi-Cloud Administration

INF 193 Cloud DevOps Engineer I

Course Information

Description	DevOps is not a framework or a workflow. It's a culture that is overtaking the business world. DevOps ensures collaboration and communication between software engineers (Dev) and IT operations (Ops). With DevOps, changes make it to production faster, resources are easier to share, and large-scale systems are easier to manage and maintain. In this part-one course, students will learn a holistic overview of the DevOps movement, focusing on the core value of CAMS (culture, automation, measurement, and sharing) in addition to both agile and lean project management principles and how old-school principles like ITIL, ITSM, and SDLC fit within DevOps.
Total Credits	3

Pre/Corequisites

Prerequisite INF 168 AWS Cloud Practitioner

Prerequisite INF 188 Cloud Data and DevOps Specialist (AWS)

INF 196 Cloud DevOps Engineer II

Course Information

Description	DevOps is not a framework or a workflow. It's a culture that is overtaking the business world. DevOps ensures collaboration and communication between software engineers (Dev) and IT operations (Ops). With DevOps, changes make it to production faster, resources are easier to share, and large-scale systems are easier to manage and maintain. In this part-two course, students will learn the various methodologies and tools an organization can adopt to transition into DevOps, including infrastructure
--------------------	---

automation, software version control, container management via Kubernetes, and much more.

Total Credits 3

Pre/Corequisites

Prerequisite INF 193 Cloud DevOps Engineer I

INT 100 Accessories

Course Information

Description This is an introduction to decorative accessories that focuses on the components of display for effective visual presentation. This course utilized the principles and techniques that are common to display work in interiors and various businesses. The main emphasis will be on design and color principals and materials used for arrangement and display, and safety issues.

Total Credits 2

INT 101 Interior Design Fundamentals

Course Information

Description This course emphasizes the fundamentals of design by exploring design elements and principles, traffic-flow patterns, color rendering, space planning, and problem solving skills for interior design. Inclusive in this course are research techniques, creating illustration boards, and honing presentation skills.

Total Credits 3

INT 105 Blueprint Reading for Interior Design

Course Information

Description	This is an introduction to blueprints for interior construction and service systems. Students will learn basic mechanical drawings, architectural drawings, and symbol and abbreviation identification used in blueprints. By using an architectural scale students will learn to draft floor plans. Construction documents, time management, and communication with architects and contractors are included in this course.
Total Credits	3

INT 110 Color Theory

Course Information

Description	This course introduces the use of color for interior design. Emphasis is on color theory, psychology of color and how it affects the brain and moods, and application of color in interior environments and lighting conditions. Included is the vocabulary of color, color temperatures, the principles of the color wheel and how to use it. With the use of paint values, tones, and shades are mastered.
Total Credits	3

INT 126 Textiles

Course Information

Description	By the end of the semester, each student will know various soft materials and treatments necessary for design of interior spaces, the functions of each, and their appropriate uses. Students should feel confident in researching design products. Each student will have started a reference library of local and national vendors.
Total Credits	3

INT 127 Materials for Interior Environments

Course Information

Description	Explorations of various hard treatments used in design are covered in this course. By the end of the semester, each student will know various hard treatments necessary for design of interior spaces, the functions of each, and their appropriate uses. Accurate specifications of interior materials are emphasized in this course. Students should feel confident in researching design products. Each student will have started a reference library of local and national vendors.
Total Credits	3

INT 141 History of Furniture & Architecture

Course Information

Description	This course provides students with the historical foundation of architecture and furniture, furniture styles, accent pieces, and accessories from Egyptian period through Post Modern. Students will learn chronologies, key terms, designer contributions, and ruler influence on furniture and architectural elements in a time line manner. Through hands on experience with furniture and actually creating pieces of “art styled” furnishings they will comprehend what is involved in furniture making.
Total Credits	3

INT 155 Lighting Technologies

Course Information

Description	This is an introduction to the basics of lighting technologies used in interior design: color, lighting styles, and lighting fixtures. Students will learn to read lamp indicators, calculate lumens and foot-candles, and determine proper heights and usage for various lighting techniques. An understanding of light analysis, residential and commercial lighting, lighting design, lighting applications, and requirements for various types of lighting are studied. Developments of lighting and electrical layouts on floor plans are inclusive in this course.
Total Credits	3

INT 160 Design Studio I

Course Information

Description This course provides long and short-term projects that address real life design situation. It will develop competencies in solving design problems and teamwork. Technical and conceptual concerns, color theory, lighting technology, scale, materials selection, and creative design articulation through presentation and illustrations are critical elements for this class. Deployment of invoicing techniques, material selection, and working within codes and standards are emphasized.

Total Credits 3

Pre/Corequisites

Prerequisite	INT 101 Interior Design Fundamentals
Prerequisite	INT105 Blueprint Reading for Interior Design
Prerequisite	INT 110 Color Theory
Prerequisite	INT 126 Textiles
Prerequisite	INT 141 History of Furniture & Architecture
Prerequisite	INT 155 Lighting Technologies
Prerequisite	INT 166 AutoCAD for Interior Design
Prerequisite	INT 190 Drafting for Interiors
Prerequisite	INT 196 Interior Design Codes and Standards

INT 165 Design Studio II

Course Information

Description This course provides long and short-term projects that address real life design situation. It will develop competencies in solving design problems and teamwork. Technical and conceptual concerns, color theory, lighting technology, scale, materials selection, and creative design articulation through presentation and illustrations are critical elements for this class.

Development of invoicing techniques, material selection, working within codes and standards and working with a budget is emphasized in the course. Students will be working with real time case studies. Students may be invited to participate in events such as The Symphony Show House Design, Judge in the Wichita Area Building Associations Parade of Homes, or shadow designers with a project.

Total Credits 3

Pre/Corequisites

Prerequisite INT 160 Design Studio I

INT 166 AutoCAD for Interior Design

Course Information

Description This course introduces computer-aided drafting (CAD). AutoCAD is used to set up drawings and construct lines, circles, arcs, other shapes, geometric constructions, and text. This course introduces drafting standards used for drawings with AutoCAD. Included are dimensioning, blocks, elevations, floor plans, section views, external references, construction drawings, standards for symbols and abbreviations, plotting and printing.

Total Credits 5

Pre/Corequisites

Prerequisite INT 105 Blueprint Reading for Interior Design

Prerequisite INT 190 Drafting for Interiors

INT 170 Business Practices & Portfolio Development

Course Information

Description This course covers client contracts, presentation skills, resource development, business forms and legal forms, business management and laws pertaining to interior design. A professional personal portfolio is refined in this class for employment purposes. A professional resume will be

included as part of the portfolio package. Students will obtain background knowledge necessary for successful business practices for interior design.

Total Credits 4

Pre/Corequisites

Prerequisite INT 160 Design Studio I
Prerequisite INF 218 Kitchen & Bath Design

INT 173 Design Studio III

Course Information

Description This is the third course in the Design Studios series. In this course students will further develop competencies in solving design problems and teamwork. Technical and conceptual concerns, color theory, lighting technology, scale, materials selection, and creative design articulation through presentation and illustrations are critical elements for this class. Development of invoicing techniques, material selection, working within codes and standards and working with a budget is emphasized in the course. Students will be working with real time case studies. Students may be invited to participate in events such as The Symphony Show House Design, Judge in the Wichita Area Building Associations Parade of Homes, or shadow designers with a project.

Total Credits 3

Pre/Corequisites

Prerequisite INT 165 Design Studio II

INT 175 Seminars for Interior Design

Course Information

Description This course is designed to help the student increase their knowledge concerning professional development through resources and artistic exploration. This course is held outside the classroom in real world

settings. Tours of museums, building of architectural interest, and local vendors and showrooms are the target of this course. Students will develop networking skills and create a resource library for future use in the field of interior design.

Total Credits 2

INT 185 Mentorship

Course Information

Description This course is designed to help the student increase their knowledge in an in-depth application and reinforcement of interiors and employability principles in an actual job setting. Mentorship allows the student to get involved with on-the-job applications that require full time commitment. The intern will be evaluated on the application of interior principles, problem solving, adaptability to job setting, use of personal skills, development of constructive work habits and ethics, practicing confidentiality, and the development of productivity and job performance through practice.

Total Credits 3

Pre/Corequisites

Prerequisite INT 160 Design Studio I

INT 190 Drafting for Interiors

Course Information

Description This course is designed to help the student increase their knowledge concerning drafting blueprints for interior construction and service systems, and emphasizes the development of fundamental drafting techniques. Topics include terminology, care and use of drafting equipment, lettering, line relationships and geometric construction.

Total Credits 3

INT 192 Illustration for Interior Design

Course Information

Description This course is designed to help the student increase their knowledge of the fundamentals of design through the exploration of sketching, hand drawing and drawings in one and two point perspective using a variety of grid layouts, eye-levels, vanishing points, cones of vision, and lighting sources are used.

Total Credits 3

Pre/Corequisites

Prerequisite INT 190 Drafting for Interiors

INT 193 Rendering for Interior Design

Course Information

Description This course is designed to help the student increase their knowledge of the fundamentals of design through the exploration perspectives, cones of vision, and lighting sources. Rendering techniques are mastered by employing markers, colored pencils, and graphite. Rendered finishes include, but not limited to, reflective finishes, textures (wood, stones, and other elements), and shadows.

Total Credits 3

INT 196 Interior Design Codes & Standards

Course Information

Description This course is designed to focus on the most current and widely used building codes, fire codes, electrical and plumbing codes as required by the industry. Included are working with code officials, documenting projects both large and small, single-family homes, historical and existing buildings, and new construction.

Total Credits 3

INT 214 Revit

Course Information

Description This course introduces building information modeling (BIM). The use of Revit is mastered by its ability to design drawings in both 2D and 3D, as well as generate documentation and schedules required for a building project. This course introduces design standards used for drawings with Revit. Included are placing of objects, dimensioning, floor plans, elevations, construction drawings, camera views, schedules and plotting.

Total Credits 5

Pre/Corequisites

Prerequisite INT 105 Blueprint Reading for Interior Design
Prerequisite INT 190 Drafting for Interiors
Prerequisite INT 166 AutoCAD for Interior Design

INT 216 Kitchen Design

Course Information

Description This course is designed to help the student develop skills necessary to design kitchen solutions using the National Kitchen and Bath Association (NKBA) standards and guidelines where applicable. Projects will include the complete documentation, specification, and job estimates needed to implement the design.

Total Credits 3

Pre/Corequisites

Prerequisite INT 190 Drafting for Interiors

INT 217 Bath Design

Course Information

Description This course is designed to help the student develop skills necessary to design bath solutions using the National Kitchen and Bath Association (NKBA) standards and guidelines where applicable. Projects will include the complete documentation, specification, and job estimates needed to implement the design.

Total Credits 3

Pre/Corequisites

Prerequisite INT 190 Drafting for Interiors

INT 218 Kitchen & Bath Design

Course Information

Description This course is designed to help the student develop special considerations necessary to design and plan kitchens and baths. Topics include the study of the basic principles of kitchen and bath design, planning, proper function and layout, accurate measuring techniques, specification documentation, theme and historical design. The application of the National Kitchen and Bath Association's Guidelines of Planning Standards and Safety Criteria for residential kitchens and bathrooms, including Universal Design concepts, will be covered. Topics include the use of building codes, safety criteria, universal and accessibility criteria, and ergonomics.

Total Credits 3

Pre/Corequisites

Prerequisite INT 190 Drafting for Interiors

Prerequisite INT 105 Blueprint Reading for Interior Design

INT 222 Kitchen and Bath Technology

Course Information

Description	This course provides the advanced skills necessary to design and present kitchen and bath solutions using current industry software applications. Kitchen and bath designs will be done completely using the 20/20 Spaces software application.
Total Credits	3

Pre/Corequisites

Prerequisite	INT 218 Kitchen & Bath Design
Prerequisite	INT 226 Advanced Kitchen & Bath Design

INT 223 Kitchen and Bath Studio

Course Information

Description	This course develops advanced skills necessary to kitchen and bath solutions using the NKBA standards and guidelines. Projects will include documentation, specifications, and job estimates needed to implement a design for a kitchen, bath and closet while keeping a schedule and working within a budget.
Total Credits	3

Pre/Corequisites

Prerequisite	INT 218 Kitchen and Bath Design
Prerequisite	INF 226 Advanced Kitchen & Bath Design
Corequisite	INT 222 Kitchen & Bath Technology

INT 226 Advanced Kitchen and Bath

Course Information

Description	This course provides advanced knowledge in the area of kitchen and bath design. The study and application of the National Kitchen and Bath Association's Guidelines of Planning Standards and Safety Criteria for residential kitchen and bath including Universal Design are included in this course. Topics include the use of building codes, safety criteria, universal and accessibility criteria, thematic and historical design.
--------------------	---

Total Credits	3
----------------------	---

Pre/Corequisites

Prerequisite	INT 218 Kitchen & Bath Design
--------------	-------------------------------

LEN 100 Lean for Operations

Course Information

Description	This course is designed to familiarize the students with the concepts and practices of Lean Manufacturing as applied in industry today. Students begin with a discussion of Lean Manufacturing's place in the overall process of continuous improvement. Students will then move on to learning to apply basic elements of lean, lean system design, lean tools and measurement methods to industry based scenarios.
--------------------	--

Total Credits	3
----------------------	---

LEN 105 Lean Culture - People Systems

Course Information

Description	This course has been developed to enable the student to understand the differences between the current work cultures and a lean culture. Students will be able to identify the steps and changes necessary to implement lean while changing the culture to ensure the gains from Lean activities will continue.
--------------------	---

Total Credits	3
----------------------	---

Pre/Corequisites

Prerequisite	LEN100 Lean for Operations
--------------	----------------------------

LEN 106 Value Stream Alignment

Course Information

Description This course is designed to familiarize the students with the process of Value Stream Mapping and how to apply it to improve processes. The class will begin with a description of Value Stream Mapping and how it utilizes material and information flows. Students will learn how to complete a Current State Value Stream Map, evaluate the map and then create a Future State Value Stream Map and Implementation Plan.

Total Credits 3

LEN 109 Lean for Engineering

Course Information

Description This course is designed to familiarize the students with the concepts and practices of Lean Manufacturing as applied in Engineering practices today. Students begin with an overview of Lean Manufacturing and continuous improvement. Students will then learn to apply basic elements of lean and process improvement to Engineering scenarios.

Total Credits 3

Pre/Corequisites

Prerequisite LEN 100 Lean for Operations

LEN 110 Lean for Services - Offices

Course Information

Description This course will teach students the basics of both Lean and Six Sigma and how these problem solving methodologies apply to the service organizations. Students completing this course will be better prepared for real business world issues, and have the ability to apply these concepts and tools at a basic level.

Total Credits 3

LGM 101 Principles of Logistics and Supply Chain Management

Course Information

Description Introduction to the field of logistics and supply chain management. Includes development of logistics systems, careers in logistics, distribution planning, supply chain security, and customer service. Also includes roles and functions of: purchasing, inventory control, physical distribution, warehousing, transportation methods, packaging, and customs.

Total Credits 3

LGM 102 Inventory Control

Course Information

Description A study of inventory control concepts and techniques. Includes, cost concepts, determining size and nature of inventory, forecasting, and inventory planning and control. Also includes ordering methods, controlling pilferage, and matching customer demand with supply.

Total Credits 3

Pre/Corequisites

Prerequisite MTH 020 Math Fundamentals Or

Prerequisite MTH 025 PACER I

LGM 103 Contracts and Freight Claims

Course Information

Description	A study of the considerations involved in the drafting and negotiation of freight and logistics contracts, and of loss avoidance and mitigation in transit. Includes legal and regulatory requirements applicable to contracts for product transportation, and logistics functions and considerations for drafting and negotiating contracts with freight carriers, warehousemen and other logistics service providers. Also includes customer satisfaction, claim preparation, filing procedures, and claim dispute resolution.
Total Credits	3

LGM 104 Computerized Logistics

Course Information

Description	Analysis of the use of computers in the logistics industry and an introduction to available logistics software. Includes the need for computers, the history and future of computers in the logistics industry, and the impact of computers on customer service. Also includes logistics software availability, selection and implementation, and security measures.
Total Credits	3

LGM 105 Warehouse Management

Course Information

Description	Survey of warehouse function, process, organization and operations. Includes analysis of warehouse location, operation, and management. Also includes controls and procedures, financial analysis, security, cargo/materials handling, and productivity.
Total Credits	3

LGM 106 Transportation and Traffic Management

Course Information

Description	A study of the domestic freight transportation system. Includes demand for freight movement, laws, regulations, pricing, and policies. Also includes traffic management, customer service, security, and international transportation issues.
Total Credits	3

LGM 107 Introduction to Purchasing

Course Information

Description	Survey of basic purchasing functions. Includes establishing requirements and quantities, developing policies and procedures for purchasing, making purchasing decisions, receiving acceptable goods, arranging packaging and shipping, and managing inventory levels.
Total Credits	3

LGM 108 International Logistics

Course Information

Description	An introduction to the role of logistics in global business. Includes the economic and service characteristics of international transportation providers, the government's role, documentation and terms of sale used in global business, and the fundamentals of effective export and import management.
Total Credits	3

LGM 190 Logistics and Supply Chain Internship

Course Information

Description	Culmination of logistics program. Includes guidelines and procedures for workplace learning, application of learned concepts on the job. Also includes initiation, management, and completion of capstone project. Consent of
--------------------	---

instructor is required before enrolling in this course. Students must complete 125 hours at a program-approved employer worksite.

Total Credits 3

LGM 196 Independent Study in Logistics and Supply Chain Management

Course Information

Description Independent study projects or applied special interest projects in logistics and supply chain management under the supervision of a faculty member.

Total Credits 3

Pre/Corequisites

Prerequisite LGM 101 Principles of Logistics and Supply Chain Management

Prerequisite LGM 105 Warehouse Management Or LGM 106 Transportation and Traffic Management Or LGM 107 Introduction to Purchasing

MCD 101 Introduction to CAD I

Course Information

Description This course introduces computer-aided drafting (CAD) and examines the hardware that makes up a CAD workstation. It also covers the operating system (Microsoft Windows) that enables the equipment to function as a unit. The course shows how to use AutoCAD to set up drawings and construct lines, circles, arcs, other shapes, geometric constructions, and text. Students will use display and editing techniques as well to obtain information about their drawings and work with drawing files. This course also introduces recommended drafting standards for students to use for properly preparing drawings with AutoCAD. This course also examines dimensioning, blocks and attributes, section views, isometric drawings, multiview layouts, annotative objects, external references, and sheet sets. Students will learn how to use AutoCAD to dimension drawings, create section lines and graphic patterns, design symbols and attributes for multiple use, and create sheet sets. Student drawings will be plotted or printed. This course also covers recommended drafting standards and practices for students to use for properly preparing drawings with AutoCAD.

Total Credits 3

Pre/Corequisites

Prerequisite CED 115 Computer Applications or

Prerequisite CED 101 Computer Essentials

MCD 102 Introduction to CAD II

Course Information

Description This course is a continuation of Introduction to CAD I. All the skills taught in Introduction to CAD I will be reinforced with projects.

Total Credits 2

Pre/Corequisites

Prerequisite MCD 101 Introduction to CAD I

MCD 104 Blueprint Reading for Drafting

Course Information

Description This course introduces the basic principles of print reading. Topics include line types, orthographic projections, dimensioning methods, and notes. Upon completion, students should be able to interpret basic prints and visualize the features of a part or system.

Total Credits 2

MCD 105 Technical Drafting I

Course Information

Description	Includes instruction in sketching and lettering, use and care of drafting equipment, geometric construction, multi-views, basics of isometrics, oblique projection and a study of drafting technology and ANSI Standards. Students draw introductory drawings to scale.
Total Credits	1

Pre/Corequisites

Corequisite AVC 112 Blueprint Reading

MCD 106 Precision Measuring

Course Information

Description	This course is designed to assist multiple technical training disciplines with the proper operation, calibration, and measuring technique's required for utilizing precision measurement equipment effectively. Both SAE and metric measuring instruments will be covered; including steel rules, feeler gauges, precision straight edge, calipers, inside and outside micrometers, angle measurement, small hole gauges, telescoping gauges and dial indicators.
Total Credits	2

Pre/Corequisites

Prerequisite MCD 104 Blueprint Reading for Drafting Or AVC 112 Blueprint Reading or MMG 113 Print Reading

MCD 110 Principles of Tool Design

Course Information

Description	Provides an understanding of the general methods of tool design with emphasis on jigs and fixtures. Instruction and projects enable students to develop ideas into practical specifications for modern manufacturing methods.
Total Credits	2

Pre/Corequisites

Prerequisite MCD 124 Advanced AutoCad or departmental approval

MCD 112 Industrial Materials & Processes

Course Information

Description Includes instruction in materials, measurement, specifications, design principles, hardware and fasteners, vocabulary, machine fabrication, Geometric Dimensioning and Tolerance (GD&T), Machinery's Handbook, surface finishes and an understanding of the fabrication practices used in manufacturing and construction.

Total Credits 2

Pre/Corequisites

Prerequisite MCD 124 Advanced AutoCAD

MCD 114 Architectural Drafting & Design

Course Information

Description Includes instruction in freehand drawing, basic residential planning, creative design, dimensioning, working details, light construction principles, building systems and blueprint development, learning construction terminology, applying ANSI Standards, local codes and drawing prints to industry standards.

Total Credits 3

Pre/Corequisites

Prerequisite MCD 102 Introduction to CAD II

Prerequisite MCD 105 Technical Drafting I

MCD 115 Machine Drafting & Design

Course Information

Description Includes instruction in creative design, geometric construction, auxiliaries, dimensioning, sectioning, isometrics, oblique's, specifications and notes, manufacturing engineering techniques and the Machinery's Handbook. Includes developing prints of working drawings, researching trade periodicals, learning machine terminology, using ANSI Standards and basic manufacturing blueprint development.

Total Credits 3

Pre/Corequisites

Prerequisite MCD 105 Technical Drafting I

Prerequisite MCD 121 Descriptive Geometry

MCD 121 Descriptive Geometry

Course Information

Description Students use computers to study descriptive geometry as it applies to drafting, and they determine true length of lines, true shapes of planes and apply descriptive geometry to real problems. Students will also create flat pattern layouts for form three dimensional shapes.

Total Credits 3

Pre/Corequisites

Pre/Corequisite MCD 101 Introduction to CAD I

MCD 122 Architectural CAD

Course Information

Description Students use computers to study descriptive geometry as it applies to drafting, and they determine true length of lines, true shapes of planes and

apply descriptive geometry to real problems. Students will also create flat pattern layouts for form three dimensional shapes.

Total Credits 4

Pre/Corequisites

Prerequisite MCD 114 Architectural Drafting & Design

MCD 124 Advanced AutoCAD

Course Information

Description This course explores the three-dimensional construction and viewing capabilities of AutoCAD. Topics covered include a review of point coordinate entry and the user coordinate system (UCS). Spherical and cylindrical coordinate entry, 3D viewing and display techniques, construction of 3D solid primitives, 2D regions, solid modeling composites, and surfaces are also introduced. The use of multiple viewports for 3D constructions and creating 2D layouts are covered. Visual styles and rendering are also discussed.

Total Credits 4

Pre/Corequisites

Pre/Corequisite MCD 115 Machine Drafting & Design

MCD 130 Basic Solidworks

Course Information

Description Students Learn how to use the SOLIDWORKS mechanical design automation software to build parametric models of parts and how to make drawings of those parts.

Total Credits 3

MCD 132 Basic Chief Architect/Architectural Desktop

Course Information

Description Students use the computers to learn how to utilize three dimensional software to design houses. This course provides instruction in how to use the software and draw walls, windows, doors, foundations, and roofs.

Total Credits 3

Pre/Corequisites

Prerequisite CED 115 Computer Applications

Prerequisite CED 101 Computer Essentials or

MCD 133 Advanced Solidworks

Course Information

Description Students Learn how to use the SOLIDWORKS mechanical design automation software to create advanced part modeling and assemblies. Using the software we will also look at assembly blueprint creation as well as prepping for the CSWA exam.

Total Credits 3

Pre/Corequisites

Prerequisite MCD 130 Basic Solidworks

MCD 134 Advanced Chief Architect/Architectural Desktop

Course Information

Description	Students use the computers to learn how to utilize three dimensional software to design houses. This course provides instruction in how to add interior furniture, terrains, elevations, working drawings, presentation drawings and how to use the camera functions.
Total Credits	3

Pre/Corequisites

Prerequisite MCD 132 Basic Chief Architect/Architectural Desktop

MCD 137 Introduction to 3D Printing

Course Information

Description	This course seeks to provide the student with a basic understanding of the industrial design process, using the 3D printer capability to obtain hands-on experience in producing a design from concept to prototype. Major topics covered this introductory course include: Basic Part Design using AutoDesk Inventor; Basic Part Design using Solidworks; 3D Part Modeling
Total Credits	2

MCD 140 Drafting Technology Internship

Course Information

Description	Introduces students to the application and reinforcement of drafting and employability principles in an actual job setting. This internship acquaints the student with realistic work situations and provides insights into a drafting job. Topics include appropriate work habits, acceptable job performance, application of drafting/CAD knowledge and skills, interpersonal relations, and development of productivity.
Total Credits	4

Pre/Corequisites

Prerequisite MCD 124 Advanced AutoCAD

Prerequisite	MCD 134 Advanced Chief Architect/Architectural Design or CAT 105 CATIA Assembly Design
Prerequisite	All paperwork must be submitted to the department before a student may enroll in this course.

MCD 201 Geometric Dimensioning & Tolerance

Course Information

Description	The Geometric dimensioning and tolerance course is an in-depth study designed to develop a basic working knowledge in geometric dimensioning and tolerancing (GD&T). It is delivered per the ASME Y14.5M, 1994 standard. This program has been presented and refined over the past 25 years and covers what personnel need to know in order to work in an industrial environment on a daily basis. The course includes emphasis on all the basics, such as the rules, measurement theory, the datum reference frame, form, orientation, profile and positional tolerancing. The program materials contain a variety of computer color animated graphics, video clips and plastic models which allow the students to clearly understand the concepts.
Total Credits	3

MCD 205 Residential Drafting

Course Information

Description	Introduces architectural drawing skills necessary to produce a complete set of construction drawings given floor plan information. Topics include: footing, foundation, and floor plans; interior and exterior elevations; sections and details; window, door, and finish schedules; site plans, and specifications.
Total Credits	3

Pre/Corequisites

Prerequisite	MCD 132 Basic Chief Architect/Architectural Desktop
--------------	---

MCD 206 Commercial Drafting & Design

Course Information

Description Introduces commercial drawing skills necessary to produce construction drawings given floor plan information. Topics include: structural steel detailing, reflected ceiling plans, rebar detailing, and commercial construction drawings.

Total Credits 3

MCD 210 Advanced Measuring

Course Information

Description This course is designed to assist multiple advanced technical training disciplines with the proper operation, field verification, and measuring techniques of instruments utilized in precision machining and manufacturing. Both SAE and metric measuring instruments will be covered in topics including Primary standards, Flexible Measuring Instruments, Support and Layout, Surface Finishing and Hardness, Data Acquisition and Optical Comparator.

Total Credits 3

Pre/Corequisites

Prerequisite MCD 106 Precision Measuring

MDU 010 Medication Aide Update

Course Information

Description Provides the continuing education required every two years by the Kansas Department of Health and Environment for renewal of the medication aide certificate.

Total Credits 1

Pre/Corequisites

Prerequisite	GRA 101 Certified Nurse Aide
Prerequisite	GRA 119 Medication Aide

MFG 100 Lean Manufacturing

Course Information

Description This course is designed to familiarize the students with the concepts and practices of Lean Manufacturing as applied in industry today. Students begin with a discussion of Lean Manufacturing's place in the overall process of continuous improvement. Students will then move on to learning to apply basic elements of lean, lean system design, lean tools and measurement methods to industry based scenarios.

Total Credits 3

MFG 125 Manufacturing Internship

Course Information

Description The internship represents an educational strategy linking the classroom with the acquisition of knowledge in the workplace. Through direct observation, reflection and evaluation, students gain an insight into the internship site's work, mission, and audience, how these relate to their academic study, as well as the organization's position in the broader industry or field. Students will produce a critical reflection on their internship experience demonstrating how they have addressed specific learning goals.

Total Credits 1

MGT 106 Introduction To Human Resources

Course Information

Description Comprehensive view of human resources within an organization. Students examine the human resource functions of strategic human resource

management, workforce planning, recruitment and selection, human resource development (training and development), total rewards (compensation and benefits), employee and union relations and risk management (health, safety and security). Emphasis is placed on understanding how human resource management contributes to an organization's strategic direction and enhances the organization's competitiveness.

Total Credits 3

MGT 111 Business Ethics

Course Information

Description Provides students with an overview of business ethics and ethical management practices, with emphasis on the process of ethical decision-making and working through contemporary ethical dilemmas faced by business organizations, managers and employees. The course is intended to demonstrate to the students how ethics can be integrated into strategic business decisions and can be applied to their own careers. The course uses a case study approach to encourage the student in developing analytical, problem-solving, critical thinking and decision-making skills. Topics include: An overview of business ethics; moral development and moral reasoning, personal values, rights and responsibilities; frameworks for ethical decision-making in business' justice and economic distribution' corporations and social responsibility, corporate codes of ethics and effective ethics programs, business and society; consumers and the environment; ethical issues in the workplace; business ethics in a global and multicultural environment; business ethics in cyberspace; and business ethics and the rule of law.

Total Credits 3

MMG 113 Print Reading

Course Information

Description Student will learn to identify basic lines, views, and abbreviations used in blueprints, interpret basic 2 D sketches using orthographic projections and blueprints, determine dimensions of features of simple parts, sketch simple

parts with dimensional measurements, determine dimensions of a multi-feature part, interpret GDT symbols, frames and datums.

Total Credits 3

MMG 115 Machining I

Course Information

Description Students will learn to conduct job hazard analysis for conventional mills and lathes, develop math skills for machine tool operations, perform preventive maintenance and housekeeping on conventional mills and lathes, select work holding devices for mills, lathes and other machine tools, calculate feeds and speeds, remove material using milling and turning processes, align milling head, use a vertical mill to center drill, drill and ream holes, change tools and tool holders on milling machines, and maintain saws and grinders.

Total Credits 3

Pre/Corequisites

Prerequisite AVC 110 Safety/ OSHA 10

MMG 116 Quality Control & Inspection

Course Information

Description Students are introduced to the science of dimensional metrology and its applications to ensure form and function of machined parts and assemblies using semi-precision and precision measuring instruments.

Total Credits 1

MMG 126 Machining II

Course Information

Description Students learn to perform basic trigonometric functions, and perform other procedures such as I.D. boring and facing operations, planning a sequence for machining operations, aligning work pieces, use work holding devices, jigs and fixtures, performing threading operations on lathes, machining keyways on a vertical mill, inspecting and dressing grinding wheels, performing O.D. & I.D. threading operations, performing O.D. & I.D. tapering operations, machining parts using milling cutters and milling machines, and tapping holes on a vertical mill.

Total Credits 3

Pre/Corequisites

Prerequisite MMG 115 Machining I

MMG 130 Bench Work

Course Information

Description Students will be provided the opportunity to learn and practice benchwork skills such as filing, drilling, tapping, deburring and layout for projects. They will gain valuable practical experience in the use of various hand tools by producing basic benchwork projects. Topics will include safety, print reading, job planning, and quality control.

Total Credits 1

Pre/Corequisites

Prerequisite AVC 110 Safety/OSHA 10

Prerequisite MMG 116 Quality Control & Inspection

Prerequisite MMG 113 Print Reading

MMG 131 Metallurgy

Course Information

Description Students learn the metallurgical terms and definitions in an effort to understand the behavior and service of metals in industry. Characteristics during heating, cooling, shaping, forming, and the stress related to their mechanical properties are covered, as well as the theory behind alloys, heat treatment processes and wear resistance.

Total Credits 1

Pre/Corequisites

Prerequisite AVC 110 Safety/ OSHA 10
Prerequisite MMG 116 Quality Control & Inspection
Prerequisite MMG 113 Print Reading

MMG 132 Machine Tool Processes

Course Information

Description Students learn to conduct a job hazard analysis for a machine tool group, analyze blueprints to layout parts and materials, select hand tools and common machine shop mechanical hardware for specific applications, prescribe cutting tools for assigned operations, calculate stock size to minimize drop, machine parts to specifications outlined in machine handbooks, summarize preparations for machining operations, and apply precautions to minimize hazards for work with lathes, mills, drills and grinders.

Total Credits 1

Pre/Corequisites

Prerequisite AVC 110 Safety/ OSHA 10
Prerequisite MMG 116 Quality Control & Inspection
Prerequisite MMG 113 Print Reading

MMG 142 Manual Lathes

Course Information

Description	This course includes theory and laboratory instruction about basic lathe operations, safety, use and care of hand and machine tools. A combination of instructional methods are utilized including hands on instruction in a state of art machining lab and interactive on line learning. Topics include basic lathe operations such as turning, facing, drilling, tapping and tool grinding
Total Credits	6

MMG 155 CNC Lathe

Course Information

Description	Introduces students to two axis computer numerical control lathes machining. The theory of operations is developed in the classroom and through interactive on line learning. Students then apply the knowledge in a cutting edge CNC laboratory. Topics include machine set up, coordinates terminology, cutter paths, angel cutting, and linear cutting.
Total Credits	3

Pre/Corequisites

Prerequisite	MMG 156 CNC Operations
--------------	------------------------

MMG 156 CNC Operations

Course Information

Description	Students will become acquainted with the history of Numerical Control (NC) and Computer Numerical Control (CNC) machines and will be introduced to a CNC machine used in the precision machining trades. They will gain practical experience in the application of "G" codes and "M" codes, writing CNC machine programs, and machine setup and operation.
Total Credits	3

Pre/Corequisites

Prerequisite	AVC 110 Safety/ OSHA 10
--------------	-------------------------

Prerequisite	MMG 116 Quality Control & Inspection
Corequisite	MMG 131 Metallurgy
Prerequisite	MMG 113 Print Reading

MMG 158 CNC Controllers

Course Information

Description	This course introduces the basic operation of CNC controllers commonly found on CNC Machining Centers and CNC Turning Centers. Topics include: basic setup and operations, tool and work offsets, loading programs into memory and minor edit functions.
Total Credits	2

Pre/Corequisites

Prerequisite	MMG 156 CNC Operations
--------------	------------------------

MMG 160 CNC Milling I

Course Information

Description	Students will gain practical experience in setting up and performing basic operations on CNC Milling machines.
Total Credits	3

Pre/Corequisites

Prerequisite	MMG 156 CNC Operations
--------------	------------------------

MMG 170 CAM I

Course Information

Description	An introductory level course for Mastercam Software. This course will cover 3D modeling, 2D Machining, Gcode generation and the creation of set-up documentation.
Total Credits	4

MMG 175 CAM II

Course Information

Description	This course introduces the methods used to create toolpaths for a CNC machining center using three dimensional solid models. Topics include 3D Wireframe & Surface, Surface Rough Plunge, Surface Finish Contour, Surface Finish Shallow, Surface Rough Pocket, and Surface Finish Contour.
Total Credits	4

Pre/Corequisites

Prerequisite	MMG 170 CAM I
--------------	---------------

MMG 180 CAM III

Course Information

Description	This course introduces the methods used to create 4 and 5 Axis toolpaths for a CNC machining center using three dimensional solid models. Topics include 4 and 5 Axis machining of complex geometry.
Total Credits	4

Pre/Corequisites

Prerequisite	MMG 175 CAM II
--------------	----------------

MMG 225 Internship/Directed Work Study

Course Information

Description	This internship course offers students opportunities to be employed in their field with a 40-hour work week to expand their work experience related to their field of study.
Total Credits	4

MSO 121 Advanced Word for Office Professionals

Course Information

Description	Upon completion of this course students should understand the basic and advanced concepts of Word. Students should be able to pass the Microsoft Word Certification Exam.
Total Credits	1

Pre/Corequisites

Prerequisite	CED 115 Computer Applications
--------------	-------------------------------

MSO 122 Advanced Excel for Office Professionals

Course Information

Description	Upon completion of this course students should understand the basic and advanced concepts of Excel. Students should be able to pass the Microsoft Excel Certification Exam.
Total Credits	1

Pre/Corequisites

Prerequisite	CED 115 Computer Applications
--------------	-------------------------------

MSO 123 Advanced PowerPoint for Office Professionals

Course Information

Description	Upon completion of this course students should understand the basic and advanced concepts of PowerPoint. Students should be able to pass the Microsoft PowerPoint Certification Exam.
Total Credits	1

Pre/Corequisites

Prerequisite	CED 115 Computer Applications
--------------	-------------------------------

MSO 124 Advanced Access for Office Professionals

Course Information

Description	Upon completion of this course students should understand the basic and advanced concepts of Access. Students should be able to pass the Microsoft Access Certification Exam.
Total Credits	1

Pre/Corequisites

Prerequisite	CED115 Computer Applications
--------------	------------------------------

MTH 020 Math Fundamentals

Course Information

Description	This online course provides students a thorough study in the arithmetic of real numbers with elementary applications in consumer math and measurement. Students are introduced to the basic concepts of algebra. Topics include: Whole Numbers and Introduction to Algebra; Integers; Introduction to Equations and Algebraic Expressions; Fractions, Rations, and
--------------------	--

Proportions; Operations on Fractional Expressions; Decimals and Percents; Measurement, Geometric Figures and Measures of Central Tendency.

Total Credits 3

MTH 025 PACER Mathematics I

Course Information

Description This traditional/hybrid course provides the opportunity for students to master the math skills required for the chosen academic/career goals via an individualized, self-accelerated pathway. Topics include: Whole Numbers and Introduction to Algebra; Integers; Introduction to Equations and Algebraic Expressions; Fractions, Ratios, and Proportions; Operations on Fractional Expressions; Decimals and Percents; Measurement, Geometric Figures and Measures of Central Tendency.

Total Credits 3

MTH 035 PACER Mathematics II

Course Information

Description This traditional/hybrid course provides the opportunity for students to master the math skills required for their chosen academic/career goals via an individual, self-accelerated pathway. This course is a continuation of the curriculum started in PACER Mathematics I. Topics include: Introduction to Polynomials; Equations, Inequalities, and Applications; Graphing and Functions; Systems of Linear Equations and Inequalities; Exponents and Polynomials.

Total Credits 3

Pre/Corequisites

Prerequisite MTH 025 PACER Mathematics I

MTH 050 Beginning Algebra with Review

Course Information

Description	This course provides students with a solid foundation of beginning algebraic concepts combined with an embedded review of fundamental mathematical skills.
Total Credits	4

MTH 095 Mathematical Reasoning

Course Information

Description	A mathematics course focused on the skills and knowledge required for numerical and quantitative literacy. The course emphasizes the development of critical thinking and quantitative reasoning skills necessary to understand, analyze, and interpret real-world quantitative information in the context of a discipline or an interdisciplinary problem and to draw conclusions that are relevant to students in college, career, and life.
Total Credits	3

Pre/Corequisites

MTH 050 – Beginning Algebra with Review OR
MTH 035 – PACER II OR
MTH 030 – Elementary Algebra OR
Appropriate Placement Assessment score

MTH 101 Intermediate Algebra

Course Information

Description	This course will provide students with the algebraic skills necessary to begin understanding abstract mathematical concepts that involve arithmetic and
--------------------	---

algebraic manipulation, equations and inequalities, graphs, analysis of equations and graphs, and real-world applications.

Total Credits 3

Pre/Corequisites

Prerequisite MTH 095 Beginning Algebra with Review OR appropriate placement test score

MTH 102 Intermediate Algebra with Review

Course Information

Description This online course provides students with the same algebraic skills discussed in MTH 101 (Intermediate Algebra) with additional review and practice of elementary algebraic skills. Topics include: Introduction to Polynomials; Equations, Inequalities, and Applications, Graphing and Functions; Systems of Linear Equations and Inequalities; Exponents and Polynomials; Factoring; Rational Expressions and Equations; Rational Exponents and Radicals; and Introduction to Quadratic Equations.

Total Credits 5

Pre/Corequisites

Prerequisite MTH 020 Math Fundamentals OR MTH 025 PACER Mathematics I

MTH 105 PACER Mathematics III

Course Information

Description This traditional/hybrid courses provides the opportunity for students to master the math skills required for their chosen academic/career goals via an individualized, self-accelerated pathway. This course is a continuation of the curriculum completed in PACER Mathematics I & II. Topics include: Factoring; Rational Expressions and Equations; Rational Exponents and Radicals; and Quadratic Equations.

Total Credits 3

Pre/Corequisites

Prerequisite MTH 035 PACER Mathematics II

MTH 111 College Algebra with Review

Course Information

Description This course is an introduction of algebraic functions and some transcendental functions with application in business and life, natural and social sciences. Topics include solving equations, zeros, rational functions, matrices, exponentials and logarithms and systems. Additional topics are included as time permits. Students must furnish their own TI-83 or TI- 83 PLUS graphing calculators.

Total Credits 5

Pre/Corequisites

Prerequisite MTH 101 Intermediate Algebra

Prerequisite MTH 102 Intermediate Algebra with Review

MTH 112 College Algebra

Course Information

Description This course will enable the student to use and interpret the mathematical symbols and notation relating to functions. The student will analyze the graphs of various mathematical functions with the assistance of a graphing utility, including polynomial, rational, root, absolute value, logarithmic and exponential functions, and solve related equations and inequalities, including systems of equations and inequalities. The student will use both graphical analysis and equation solving in the context of word problems. Topics include: Equations and Inequalities; Functions and Graphs; Polynomial and Rational Functions; Exponential and Logarithmic Functions; Systems of Equations and Inequalities; Matrices and Determinants. The learning outcomes and competencies detailed in this outline meet, or exceed the learning outcomes and competencies specified by the Kansas

Core Outcomes Project for this course, as approved by the Kansas Board of Regents (Transfers as MAT 1010).

Total Credits 3

Pre/Corequisites

Prerequisite MTH 101 Intermediate Algebra OR MTH 102 Intermediate Algebra OR MTH 105 PACER Mathematics III

MTH 113 Trigonometry

Course Information

Description This course will enable the student to identify and manipulate trigonometric functions, solve triangles, use and prove identities, solve trigonometric equations, use and apply vectors to real-life models, and use complex numbers and polar coordinates. Topics include: Angles and the Trigonometric Functions; Graphs of the Trigonometric Functions; Inverse Trigonometric Functions; Trigonometric Identities; Laws of Sines and Cosines; Vectors; Complex Numbers, Polar Coordinates and Parametric Equations. The learning outcomes and competencies detailed in this outline, meet or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Project for this course, as approved by the Kansas Board of Regents (Transfers as MAT 1030)

Total Credits 3

Pre/Corequisites

Prerequisite MTH 111 College Algebra with Review OR MTH 112 College Algebra

MTH 115 Pre-Calculus Mathematics

Course Information

Description This course will enable the student to develop and apply models using linear, polynomial, rational, logarithmic, exponential, and trigonometric functions. The successful student will be able to identify and manipulate functions, solve equations, prove trigonometric identities, solve triangles, and use polar coordinates. Topics include: Equations and Inequalities;

Functions and Graphs; Polynomial and Rational Functions; Exponential and Logarithmic Functions; Systems of Equations and Inequalities; Matrices and Determinants; Angles and the Trigonometric Functions; Graphs of the Trigonometric Functions; Inverse Trigonometric Functions; Trigonometric Identities; Laws of Sines and Cosines; Vectors; Complex Numbers, Polar Coordinates and Parametric Equations.

Total Credits 5

Pre/Corequisites

Prerequisite MTH 101 Intermediate Algebra OR MTH 102 Intermediate Algebra with Review
OR MTH 105 PACER Mathematics III

MTH 120 Elementary Statistics

Course Information

Description This course will enable the student to collect data by appropriate sampling techniques, summarize data with graphs and tables, calculate descriptive statistics, identify misuses of statistics, assess risk using concepts of probability, estimate and make decisions about means and proportions through the use of confidence intervals and hypothesis testing, and perform linear regression. Topics include: Data Collection; Organizing and Summarizing Data; Numerically Summarizing Data; Describing the Relation between Two Variables; Probability; Discrete Probability Distributions; The Normal Probability Distribution; Sampling Distributions; Estimating the Value of a Parameter; Hypothesis Tests Regarding A Parameter, and Inferences on Two Samples. The learning outcomes and competencies detailed in this outline meet, or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Project for this course, as approved by the Kansas Board of Regents (Transfers as MAT 1020).

Total Credits 3

Pre/Corequisites

Prerequisite MTH 112 College Algebra OR MTH 115 Pre-Calculus Mathematics

MTH 121 Elementary Statistics Lab with Excel

Course Information

Description	Using Excel to construct Frequency Tables & Histograms, compute and explore Measures of Tendency. Sampling Distributions, Confidence Intervals, and Hypotheses testing. This course requires that the student have MICROSOFT EXCEL 97 or greater.
Total Credits	1

Pre/Corequisites

Prerequisite	MTH 120 Elementary Statistics
--------------	-------------------------------

MTH 125 Calculus I

Course Information

Description	This course will enable the students to solve problems involving limits, derivatives and some types of definite and indefinite integrals both analytically and graphically, and use them in physical applications. The learning outcomes and competencies detailed in this outline meet, or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Project for this course, as approved by the Kansas Board of Regents (Transfers as MAT 2010).
Total Credits	5

Pre/Corequisites

Prerequisite	MTH 112 College Algebra and MTH 113 Trigonometry OR MTH 115 Pre-Calculus Mathematics
--------------	--

MTH 150 Calculus II

Course Information

Description	This course will enable the student to understand applications and methods of integration, improper integrals, convergence and divergence of infinite
--------------------	---

series, graphs of conic sections, the polar coordinate system, parametric equations, and linear algebra

Total Credits 5

Pre/Corequisites

Prerequisite MTH 125 Calculus I

MUS 110 Music Appreciation

Course Information

Description This course is designed for non-music majors. A background in music is not necessary for enrollment. Emphasis is placed on the development of competence in listening to music through the study of the sources, mediums, elements of music, musical forms, composers, and periods of music

Total Credits 3

NDT 100 Penetrant Inspection

Course Information

Description In this course students will master the competencies associated with Liquid Penetrant testing at Level I and Level II. This course adheres to the standards developed by the American Society for Nondestructive Testing (ASNT). Laboratory work will parallel lecture materials from the classroom.

Total Credits 3

NDT 101 Magnetic Particle Testing

Course Information

Description In this course students will master the competencies associated with the Magnetic Particle Testing method at Level I and Level II. This course adheres to the standards developed by the American Society for Nondestructive Testing (ASNT). Laboratory work will parallel lecture materials from the classroom.

Total Credits 3

NDT 102 Radiation Safety

Course Information

Description In this course students will master the competencies associated with Radiation Safety. This course adheres to the standards developed by the American Society for Nondestructive Testing (ASNT), Nuclear Regulatory Commission, and the State of Kansas. Laboratory work will parallel lecture materials from the classroom.

Total Credits 3

NDT 103 Radiographic Testing Level II

Course Information

Description In this course students will master the competencies associated with Radiographic Testing at Level II. This course adheres to the standards developed by the American Society for Nondestructive Testing (ASNT). Laboratory work will parallel lecture materials from the classroom.

Total Credits 3

Pre/Corequisites

Prerequisite NDT 107 Radiographic Testing Level I

NDT 105 Computed Radiographic Imaging

Course Information

Description	This course provides students with the knowledge and skills needed to utilize computed radiographic imaging materials and equipment in the manufacturing, aerospace, transportation, energy, and refinery environment. Students will learn to utilize the different type's radiographic imaging equipment, measuring tools, imaging enhancing devices, and storage and transfer functions. Students will learn to operate computer radiography equipment and perform operator maintenance and process controls. Upon completion of the course the student will be able to perform all function of computed radiographic imaging to industry standards.
Total Credits	3

Pre/Corequisites

Prerequisite	NDT 102 45 Hour Radiation Safety
Prerequisite	NDT 103 Radiographic Testing Method II

NDT 107 Radiographic Testing Level I

Course Information

Description	In this course students will master the competencies associated with Radiographic Testing at Level I. This course adheres to the standards developed by the American Society for Nondestructive Testing (ASNT). Laboratory work will parallel lecture materials from the classroom.
Total Credits	3

Pre/Corequisites

Prerequisite	NDT 102 Radiation Safety
--------------	--------------------------

NDT 110 Eddy Current Level I

Course Information

Description	In this course students will master the competencies associated with electromagnetic (Eddy Current) testing at Level I. This course adheres to the standards developed by the American Society for Nondestructive Testing (ASNT). Laboratory work will parallel lecture materials from the classroom.
--------------------	---

Total Credits 3

NDT 111 Eddy Current Level II

Course Information

Description In this course students will master the competencies associated with electromagnetic (Eddy Current) testing at Level II. This course adheres to the standards developed by the American Society for Nondestructive Testing (ASNT). Laboratory work will parallel lecture materials from the classroom.

Total Credits 3

Pre/Corequisites

Prerequisite NDT 110 Eddy Current Level I

NDT 112 Ultrasonic Testing Method Level I

Course Information

Description In this course, students will master the competencies associated with Ultrasonic Testing Methods at Level I. This course adheres to the standards developed by the American Society for Nondestructive Testing (ASNT). Laboratory work will parallel lecture materials from the classroom.

Total Credits 3

NDT 113 Ultrasonic Testing Method Level II

Course Information

Description In this course, students will master the competencies associated with Ultrasonic Testing Methods at Level II. This course adheres to the standards developed by the American Society for Nondestructive Testing (ASNT). Laboratory work will parallel lecture materials from the classroom.

Total Credits 3

Pre/Corequisites

Prerequisite NDT 112 Ultrasonic Testing Method Level I

NDT 114 Visual Inspection

Course Information

Description In this course, students will master the competencies associated with Visual Inspection. This course adheres to the standards developed by the American Society for Nondestructive Testing (ASNT). Laboratory work will parallel lecture materials from the classroom.

Total Credits 2

NDT 115 Introduction to Ultrasonic C-Scan and Phased Array

Course Information

Description This course provides students with the knowledge and skills needed to utilize Ultrasonic C-Scan and Phased Array inspection materials and equipment in the manufacturing, aerospace, transportation, energy, and refinery environment. Students will learn to utilize the different type's Ultrasonic C-Scan and Phased Array materials and equipment, interpret the test results and apply those results to industry-specific scenarios

Total Credits 3

Pre/Corequisites

Prerequisite NDT 112 Ultrasonic Testing Method Level I

Prerequisite NDT 113 Ultrasonic Testing Method Level II

NDT 116 Bond Testing for NDT

Course Information

Description	This course is designed to provide students with the classroom and laboratory experience which will prepare them to perform bond testing on composite and conventional aviation parts/assemblies. Topics will include materials, equipment and bond testing methods. Laboratory experiences will include selecting and performing bond testing on various types of composite and mechanical parts/assemblies.		
Total Credits	2		

Pre/Corequisites

Prerequisite	NDT 110	Eddy Current Level I
Prerequisite	NDT 112 Ultrasonic Testing Method Level I	

NDT 117 Assembly Overview for NDT

Course Information

Description	This course is designed to provide the NDT student with the basic overview of aircraft assembly including both composite and sheet metal assembly and inspection techniques.		
Total Credits	3		

NDT 120 Ultrasonic Phased Array II

Course Information

Description	This course provides students with the knowledge and skills needed to utilize Ultrasonic Phased Array inspection materials and equipment in the manufacturing, aerospace, transportation, energy, and refinery environment. Students will learn to utilize the different type's Ultrasonic Phased Array materials and equipment, interpret the test results and apply those results to industry-specific scenarios. Students will master techniques for the phased array shear wave inspection of welds to ASTM, ASME, and Aviation standards. Students will learn to display inspection results in A-Scan, S-Scan, and C-Scan formats simultaneously while using overlays for correct defect identification and location.		
Total Credits	2		

Pre/Corequisites

Prerequisite	NDT 112 Ultrasonic Testing Method Level I
Prerequisite	NDT 113 Ultrasonic Testing Method Level II

NDT 123 Advanced Ultrasonic Testing Methods

Course Information

Description	This course will provide students with basic knowledge and skills to utilize specific ultrasonic testing techniques to include C-Scan, Phased Array, Bond Testing and Time of flight Diffraction in the manufacturing, aerospace, transportation, energy, and refinery environment. Students will learn to inspect and evaluate various materials including metallic welded components and composites. Students will understand the basic elements of each technique and will demonstrate this understanding through written and practical laboratory examinations.
Total Credits	5

Pre/Corequisites

Prerequisite	NDT 113 Ultrasonic Testing level II
--------------	-------------------------------------

NDT 125 Phased Array Time of Flight Diffraction (TOFD)

Course Information

Description	This course provides students with the knowledge and skills needed to utilize Ultrasonic Time of Flight Diffraction (TOFD) technique materials and equipment in the manufacturing, aerospace, transportation, energy, and refinery environment. Students will learn to utilize the different type's TOFD materials and equipment, interpret the test results, size internal flaws, and apply those results to industry-specific scenarios. Students who complete this course should have sufficient background to utilize the Ultrasonic Phased Array TOFD technique used in many industries
Total Credits	2

Pre/Corequisites

Prerequisite	NDT 112 Ultrasonic Testing Method Level I
Prerequisite	NDT 113 Ultrasonic Testing Method Level II

NDT 145 Maintenance & Reliability

Course Information

Description	Maintenance & Reliability is a class designed to introduce students to the theories, principles, & applications of many predictive maintenance technologies as used in industrial settings to aid in equipment reliability. It also covers the strategies used to maintain machine reliability, reduce downtime, & reduce maintenance costs. The class covers a portion of the basic concepts for thermography, vibration analysis, oil analysis, airborne ultrasound, and electric motor circuit analysis as recommended by ASNT-TC-1A for certification.
Total Credits	3

NDT 150 Vibration Analysis Level I

Course Information

Description	Provides an introduction to Vibration Analysis. The student focuses on learning vibration analysis terminology, measurement units, principles, hardware, and software. The course also gives a functional understanding of machinery basics. Students will demonstrate proficiency in data collection and fundamentals of analysis.
Total Credits	3

Pre/Corequisites

Prerequisite	MTH 020 Math Fundamentals
--------------	---------------------------

NDT 151 Vibration Analysis Level II

Course Information

Description This course reviews and expands on the knowledge obtained in Vibration Analysis I. The students will use calculations, graphs, and charts to demonstrate their ability to understand the theories and application of vibration analysis. Students will become familiar with the many different tools, software, and accessories necessary to provide good vibration analysis to a customer. The students will gain more knowledge in the proper way to collect and analyze data.

Total Credits 3

Pre/Corequisites

NDT 150 Vibration Analysis I

MTH 112 College Algebra

NDT 152 Vibration Analysis Level III

Course Information

Description This course is designed to provide the student with the ability to design or manage a vibration program, to evaluate an outside vibration analysis program, to integrate other predictive technologies into their program, and to provide in depth analysis to an existing vibration analysis program. A level III vibration analyst may also be called upon to provide on-the-job training to new hires within a company.

Total Credits 3

Pre/Corequisites

Prerequisite NDT 151 Vibration Analysis II

Prerequisite MTH 112 College Algebra

NDT 155 Thermography Level I

Course Information

Description	The course provides an introduction to the principles of Thermography and the operation of Infrared equipment in realistic scenarios. The student focuses on learning the modes of heat transfer, radioactivity. The student will gain proficiency in identifying acceptable and rejectable images, optimizing images, and selecting the best image perspective to capture required data. Students will also demonstrate the knowledge and ability to perform Image storage and recall, report writing, and quality reporting.
Total Credits	3

NDT 156 Thermography Level II

Course Information

Description	This course expands upon the topics covered in Thermography 1 and goes deeper into data analysis. Students will learn the functionality of thermal cameras, keys to capturing good thermal images, data storage, and reporting. Students will use mathematical formulas to calculate heat transfer rates associated with the laws of thermodynamics.
Total Credits	3

Pre/Corequisites

Prerequisite	NDT 155 Thermography I
--------------	------------------------

NDT 160 Acoustic Emission Testing Level I

Course Information

Description	In this course students will master the competencies associated with the Acoustic Emission Testing method at Level I and Level II. This course adheres to the standards developed by the American Society for Nondestructive Testing (ASNT). Laboratory work will parallel lecture materials from the classroom.
Total Credits	3

NDT 165 Machine Lubrication and Analysis I

Course Information

Description Machine lubrication and analysis I provides an introduction to machine lubrication and the techniques used to analyze lubricating fluids. The student focuses on machine failure modes and the role of lubrication in asset health, preventive, and predictive maintenance. The student learns the fundamentals of tribology, chemical composition of lubricating fluids, and various types of lubricating systems. Students will demonstrate proper lubricant application in various situations.

Total Credits 3

NDT 166 Machine Lubrication and Analysis II

Course Information

Description Machine lubrication and analysis II provides a more in depth look at machine lubrication and the techniques used to analyze lubricating fluids. The student focuses on machine failure modes and the role of lubrication in asset health, preventive, and predictive maintenance. The student learns the fundamentals of tribology, chemical composition of lubricating fluids, and various types of lubricating systems. Students will demonstrate proper lubricant application in various situations.

Total Credits 3

Pre/Corequisites

Prerequisite NDT 165 Machine Lubrication and Analysis I

NDT 167 Machine Lubrication and Analysis III

Course Information

Description Machine lubrication and analysis III is designed to provide the student with the ability to design or manage an oil analysis program, to evaluate outside oil analysis services, to integrate other predictive technologies into their program, and to provide in depth analysis to an existing oil analysis program. A level III oil analyst may also be called upon to provide on-the-job training to new hires within a company.

Total Credits 3

Pre/Corequisites

Prerequisite NDT 166 Machine Lubrication and Analysis II

NDT 170 Electrical Motor Testing

Course Information

Description This course will teach students to use a PdMA MCEmax tester to evaluate the condition of electric motors, motor circuits, and the associated components. Students will learn the basics of electrical circuits, electrical theory, and motor construction. This course will take the student through the process from hooking up the tester, to analyzing the data, and making repair recommendations

Total Credits 2

OPM 100 Lean Sigma

Course Information

Description This course will teach students the basics of both Lean and Six Sigma and how these problem solving methodologies apply to manufacturing and service organizations. Students completing this course will be better

prepared for real business world issues, and have the ability to apply these concepts and tools at a basic level.

Total Credits 3

OPM 105 Operations Management for Organizational Success

Course Information

Description Operations Management introduces and applies the components of the continuous improvement philosophy and process to the operations of organizations. The study of dynamic management involvement and the use of continuous evaluation tools are reviewed and applied. These include applied management techniques and statistical measures of business processes.

Total Credits 3

OPM 110 Introduction to Supply Chain Management

Course Information

Description Supply Chain Management introduces the building blocks of Supply Chain Strategy and the relationship with SC corporate strategy. Defines the elements of Supply Chain Management, including the importance of collaboration and partnering in a competitive business environment. Discusses the need for measures to manage the business and how the financial aspects are affected by SCM. Discusses outsourcing and why companies outsource to remain competitive.

Total Credits 3

OPM 115 Introduction to Project Management

Course Information

Description This course focuses on a holistic approach to project management. The content deals with planning, scheduling, organizing, and controlling projects for example, product development, construction, information systems, new businesses, and special events. The course includes major topics of Strategy, Priorities, Organization, Project Tools, and Leadership. Primary class emphasis is on the project management process and tools. Project management is becoming more important in today's world. Mastery of key tools and concepts could give you a significant competitive advantage in the marketplace.

Total Credits 3

PCT 100 EKG for Healthcare Providers

Course Information

Description Focuses on the specialized procedures associated with the cardiovascular system. Students will perform electrocardiograms. Course also serves as an introduction to basic dysrhythmias and the skills necessary to recognize normal from abnormal in an emergency. Specific attention is given to patient significance and possible early intervention for each dysrhythmias. EKG rhythm strips, and exercises are provided for student recognition and practice.

Total Credits 4

Pre/Corequisites

Prerequisite ALH 131 Diseases, Disorders, and Diagnostic Procedures

Prerequisite ALH 101 Medical Terminology

Prerequisite ALH 155 Pharmacology for Allied Health

PCT 105 Dementia Care

Course Information

Description Examines the types and causes of dementia and how they differ from symptoms of the normal aging process. Provides an overview of common behavioral problems associated with dementia as well as the best strategies

and approaches for dealing with these problems. Insights into why individuals with dementia behave in erratic ways, and affirms these patients' humanistic value despite such challenging behavior.

Total Credits 4

PCT 110 Phlebotomy and Laboratory Procedures

Course Information

Description This course addresses the role and function of the professional in the clinical laboratory setting. Topics include safety, Clinical Laboratory Improvement Act of 1988 (CLIA-88) government regulations and quality assurance in the laboratory. Students learn concepts and perform procedures in the different departments of the laboratory, including specimen collection and performance of CLIA-88 low- and/or moderate-complexity testing. Students demonstrate competencies in a wide variety of techniques used to collect, process, and test specimens.

Total Credits 4

PDV 010 Campus Safety Act

Course Information

Description This course serves as the primary prevention and awareness program for all students, faculty, and staff in support of the Title IX, the Campus SaVE Act, and the Violence against Women Act (VAWA). This course will promote the awareness of rape, acquaintance rape, domestic violence, dating violence, sexual assault, and stalking. Participants will learn safe and positive options a bystander can take when he or she witnesses potential violations, information about risk reduction, and how to recognize warning signs of abusive behavior and potential attacks. Participants will learn procedures victims should follow as well as resources, protection, and support options for victims. Finally, participants will learn the disciplinary procedures in place at WSU Tech.

PDV 101 Learning Strategies

Course Information

Description	This course is designed to help the student learn effective study skills that enable the student to be academically successful. The student will learn how to make application of these skills in a course of study. The course will cover time management, goal setting, listening, note taking, test strategies, and online learning. It is recommended any student who has a GPA of 2.0 or lower upon initial enrollment or after his/her first semester of college course work enroll in the class. This course does not count toward an A.S., A.A., A.G.S., or A.A.S. degree.
Total Credits	3

PDV 105 Blueprint for Personal Success

Course Information

Description	The professional world is full of challenging situations, including conflicting personalities, miscommunication, and cultural differences. In this course, students will learn about typical workplace etiquette protocols, communication standards, and cultural awareness strategies in order to navigate these common obstacles. This course will prepare students by educating them on the importance of establishing and maintaining their professional image in the workplace. Whether students are working on the manufacturing floor, in a medical facility or in a professional office setting practicing professional etiquette will help ensure that their occupational environment is positive and productive. Students will integrate internal attitudes with external behaviors so that their personal attributes reflect the expectations of their future employers. The course provides a study of human relations and professional development in today's rapidly changing world. The course prepares students for living and working in a complex society through a focus on professionalism, work ethic, teamwork (collaboration) and oral communication. Topics include: Goal Setting, Entry Level Leadership, Communication, Teamwork and Diversity, Career Management, Lifestyle Design, and Disruption in Industry.
Total Credits	2

PED 110 Lifetime Fitness

Course Information

Description	Exposes students to facts about and experiences in dealing with motor, physical, physiological, psychological and nutritional aspects of the human being and the responsibility to maintain fitness during a life span.
Total Credits	1

PED 120 Introduction to the Athletic Training Profession

Course Information

Description	This course covers introductory principles relating to the profession of athletic training. Students will study organizational and professional responsibilities, injury/illness prevention techniques, characteristics of sports injuries, immediate care, treatment/rehabilitation, and various sports injuries.
Total Credits	3

PHL 110 Ethics

Course Information

Description	A practical approach to recognizing, understanding and solving ethical problems confronting individuals in today's society. Basic concepts of applied ethical theories in moral philosophy and reasoning are examined using critical thinking and responsible decision-making skills.
Total Credits	3

PHL 115 Logic

Course Information

Description	This course deals with the uses of logical concepts and techniques to evaluate and criticize reasoning. Studies some elementary systems of formal logic. Arguments evaluated are drawn from such diverse fields as law, science, politics, religion, and advertising.
Total Credits	3

PHR 105 Negotiations And Relationship Management

Course Information

Description	This course is designed to help students understand the principles, strategies and tactics of effective negotiation and relationship management. Students will learn to identify and assess negotiation variables, develop an effective negotiation plan and implement various strategies and tactics to ethically resolve conflicts and interpersonal differences.
Total Credits	3

PHS 110 Physical Science

Course Information

Description	A non-technical course intended for students who are majoring in fields other than science. The application of scientific knowledge to daily life activities is emphasized by examining the fundamental principles in physics, chemistry, geology and astronomy utilizing the scientific method.
Total Credits	5

PHS 115 Introductory Astronomy

Course Information

Description	Introduction to Astronomy topics include fundamental concepts (planetary, stellar, and lunar motion; gravitation; light and telescopes); solar system 1
--------------------	---

(Earth, Moon, Mercury, Venus, and Mars); solar system 2 (Jupiter and satellites, Saturn and satellites, outer planets); stars (nature of stars, birth, evolution and death of stars, neutron stars, black holes); universe (galaxies, quasars, blazars, cosmology).

Total Credits 5

PHS 120 General Physics I

Course Information

Description Topics include mechanics — linear motion, rotational motion, force, work, energy, momentum and conservation principles; heat-temperature, ideal gas, eating as a form of energy, first law of thermodynamics, second law of thermodynamics and entropy; and wave motion — simple harmonic motion, elasticity and the wave equation. This class is designed for students who need five hours of physics without calculus.

Total Credits 5

Pre/Corequisites

Prerequisite MTH 112 College Algebra

PHS 125 General Physics II

Course Information

Description A continuation of PHS 120 General Physics I. Topics include electricity and magnetism, electric potential, current electric power, magnetic field and induction; optics nature of light and wave optics; and modern physics special relativity, atomic structure, quantum mechanics and radioactivity. This class is taught in the spring of the year

Total Credits 5

Pre/Corequisites

Prerequisite PHS 120 General Physics I

PIM 100 Introduction to Materials Management

Course Information

Description	This introductory course describes the basics of supply chain management, manufacturing planning and control systems, purchasing, and physical distribution. Topics of performance metrics ERP, supply chain approaches and implications, lean production fundamentals, and basic scheduling rules are discussed. Demand management, sales and operations planning, and master scheduling rules are examined in-depth.
Total Credits	2

PIM 105 Basics of Supply Chain Management

Course Information

Description	This course describes the basics of supply chain management, manufacturing planning and control systems, purchasing, and physical distribution. This course will explain performance metrics, ERP, supply chain approaches and implications, lean production fundamentals, and basic scheduling rules. Topics of demand management, sales and operations planning, and master scheduling are examined in-depth.
Total Credits	2

PIM 110 Master Planning of Resources

Course Information

Description	The topics of demand management, sales and operations planning, and master scheduling are examined in-depth. Both supply and demand planning for mid-to long-term independent demand are discussed. Priority planning and capacity planning issues are addressed.
Total Credits	2

Pre/Corequisites

Prerequisite PIM 105 Basics of Supply Chain Management

PIM 115 Detailed Scheduling & Planning

Course Information

Description The course will include inventory management, material requirements planning, capacity requirements planning, procurement, and supplier relationships.

Total Credits 2

Pre/Corequisites

Prerequisite PIM 110 Master Planning of Resources

PIM 120 Execution & Control of Operations

Course Information

Description The principles, approaches, and techniques needed to schedule, control, measure, and evaluate the effectiveness of production operations are covered. A broad range of production operations are reviewed including project, batch, line, continuous, and remanufacturing environments.

Total Credits 2

Pre/Corequisites

Prerequisite PIM 115 Detailed Scheduling and Planning

PIM 125 Strategic Management of Resources

Course Information

Description This course covers strategic planning and implementation and describes how market requirements drive the resources and processes of an organization. This course also explores the relationship among existing and emerging processes and technologies to manufacturing strategy and supply chain related functions.

Total Credits 2

Pre/Corequisites

Prerequisite PIM 120 Execution & Control of Operations

PLT 104 Introduction to Aviation

Course Information

Description This course will expose the student to knowledge areas of emphasis pertaining to FAA regulations, accident reporting, chart usage, navigation, radio communications, weather, collision avoidance, aerodynamics, systems, weight and balance, stall awareness, aeronautical decision making, preflight and ground operations. Successful completion of this course will provide the student with all information necessary to successfully pass the required FAA written exam for Airplane Single Engine Land (ASEL) and be adequately prepared for the oral portion of the required practical test.

Total Credits 3

Pre/Corequisites

Corequisite PLT 112 Private Pilot Flight Lab

PLT 108 Simulated Flight Lab I

Course Information

Description This course provides the student the opportunity to gain familiarity with the FMS and aircraft operations. The course allows the student to rehearse all required maneuvers defined by the FAA to successfully complete the Private Pilot Practical Flight Exam.

Total Credits 1

Pre/Corequisites

Corequisite	PLT 112 Private Pilot Flight Lab
Corequisite	PLT 104 Introduction to Aviation

PLT 112 Private Pilot Flight Lab

Course Information

Description	This course will enable the student to develop the knowledge and skills required to safely exercise the privileges and responsibilities of a Private Pilot and pass the Private Pilot Practical Flight Exam. Course content includes instruction in aerodynamics, aircraft systems, FAA regulations, U.S. Airspace System, weight and balance, aircraft performance, aviation weather, flight publications, radio navigation, cross-country planning and navigation, basic flight physiology, and flight safety.
Total Credits	2

Pre/Corequisites

Corequisite	PLT 104 Introduction to Aviation
-------------	----------------------------------

PLT 116 Aviation Weather

Course Information

Description	This course entails the study of weather hazards, meteorological flight planning, aviation weather equipment and human factors in weather flying safety. Elements of the atmosphere with emphasis on those processes that affect the global atmospheric circulation, and meteorology as it applies to the operation of aircraft with emphasis on observation of weather elements and interpretation of flight planning weather information will be emphasized.
Total Credits	3

PLT 120 Instrument Regulations and Procedures

Course Information

Description This course will provide the student with a detailed study of the regulations, procedures, publications, and weather considerations necessary for operating IFR in the national airspace system. Terminal and enroute procedures will be studied in detail. Successful completion of this course will provide the student with all information necessary to successfully pass the required FAA written exam and be adequately prepared for the oral portion of the practical test required.

Total Credits 3

Pre/Corequisites

Corequisite PLT 128 Basic Attitude Instrument Flying

Prerequisite PLT 112 Private Pilot Flight Lab

PLT 124 Simulated Flight Lab II

Course Information

Description This course provides the student the opportunity to rehearse aircraft control solely by referencing the instruments, enter flight plans and procedures, and learn to operate their flight management system effectively during flight. Familiarization with avionics utilization is a central focus of this lab.

Total Credits 1

Pre/Corequisites

Prerequisite PLT 112 Private Pilot Flight Lab

Corequisite PLT 120 Instrument Regulations and Procedures

Corequisite PLT 128 Basic Attitude Instrument Flying

PLT 128 Basic Attitude Instrument Flying

Course Information

Description	This course will introduce the student to the skills required to fly the airplane solely by referencing the instruments in the panel. Performing the four basics of flight, timed turns, unusual attitude recovery, navigation by VOR and GPS, performing both precision and non-precision approaches, as well as planning and executing cross country flight will prepare the student to successfully meet the standards set forth by the FAA to earn the Instrument Rating.
Total Credits	2

Pre/Corequisites

Corequisite	PLT 120 Instrument Regulations and Procedures
Prerequisite	PLT 112 Private Pilot Flight Lab

PLT 132 Aviation Safety and Human Factors

Course Information

Description	This course provides the student with a detailed introduction into aspects of aviation safety, aviation safety programs, risk management, and the associated components of pilot psychology, physiology, human factors, and accident review and investigation. This course also introduces the student to issues influencing human performance in the complex operational aviation environments. Theory and practical applications of cognitive processing, decision-making, interpersonal interaction and communication will be presented. This course also provides an introduction to design elements intended to optimize man-machine interaction.
Total Credits	3

PLT 136 Crew Resource Management

Course Information

Description	This course will provide the student the opportunity to explore the many issues involved in Crew Resource Management. It will expose the student to
--------------------	---

issues involved with communication, situational awareness, pilot judgement, risk assessment and mitigation, and workload management. Students will practice various models of risk assessment and mitigation as well as learn how to properly utilize all available resources in order to conduct a safe and efficient flight both solo and as part of a crew.

Total Credits 2

PLT 140 Avionics

Course Information

Description This course provides the student an overview of the Garmin G1000 Glass cockpit and explores the use of advanced technology in the field of aviation. It also exposes the student to future technologies and their impact on the aviation industry. Topics include flight management systems, geospatial referencing systems, airspace information as well as control systems (ADS-B and NextGen).

Total Credits 2

PLT 144 Introduction to Commercial Flight

Course Information

Description This course provides the student exposure to the aeronautical knowledge areas required by FAA regulations for a Commercial Pilot Certificate (ASEL). Successful completion of the course will provide the student with all information necessary to successfully pass the required FAA written exam and be adequately prepared for the oral portion of the practical test required.

Total Credits 2

Pre/Corequisites

Corequisite PLT 152 Commercial Flight I
Prerequisite PLT 128 Basic Attitude Instrument Flying

PLT 148 Simulated Flight Lab III

Course Information

Description	This course allows the student to rehearse all required maneuvers defined by the FAA to successfully complete the Commercial Pilot Practical Flight Exam.
Total Credits	1

Pre/Corequisites

Prerequisite	PLT 128 Basic Attitude Instrument Flying
Corequisite	PLT 144 Introduction to Commercial Flight
Corequisite	PLT 152 Commercial Flight I

PLT 152 Commercial Flight I

Course Information

Description	This course will introduce the student to all commercial maneuvers and standards. The student will also build hours towards minimum time requirements required to successfully pass the Commercial Pilot Practical Exam.
Total Credits	3

Pre/Corequisites

Corequisite	PLT 144 Introduction to Commercial Flight
Prerequisite	PLT 128 Basic Attitude Instrument Flying

PLT 156 Multiengine Aircraft Operation

Course Information

Description	This course is designed to develop the knowledge and skills necessary to safely and proficiently exercise the privileges and responsibilities of a Commercial Pilot with a Multi-engine rating. Included are discussions concerning Aeronautical Decision Making of multi-engine aircraft systems, aerodynamics, Crew Resource Management, weight and balance, aircraft performance, and abnormal/emergency procedures. The course also includes a scenario - based introduction to U.S. Title 14 Code of Federal Regulations (CFR) governing common carriage commercial operations.
Total Credits	2

Pre/Corequisites

Corequisite	PLT 160 Multiengine Flight Lab
Prerequisite	PLT 128 Basic Attitude Instrument Flying

PLT 160 Multiengine Flight Lab

Course Information

Description	This course provides the practical experience necessary for the student to demonstrate safe operation of a multi-engine aircraft, as well as demonstrate knowledge of best single engine rate of climb (Vyse) and Minimum Control Speed (Vmc). The student will learn how to determine engine failure, demonstrate aircraft control with a simulated engine failure, and perform Instrument approaches during simulated engine failure. The tasks in this course will prepare the student to successfully pass the Multi-Engine Airplane (AMEL) exam.
Total Credits	1

Pre/Corequisites

Corequisite	PTL 156 Multiengine Aircraft Operation
Prerequisite	PLT 128 Basic Attitude Instrument Flying

PLT 164 Commercial Flight II

Course Information

Description This course enables the student to complete all cross country and time requirements needed to meet minimum standards to sit for the Commercial Pilot Practical Exam.

Total Credits 3

Pre/Corequisites

Prerequisite PLT 152 Commercial Flight I

Corequisite PLT 168 Certified Flight Instruction

PLT 168 Certified Flight Instruction

Course Information

Description Provides the student with a detailed study of the responsibilities and teaching concerns of a flight instructor. The course is divided into two major sections: fundamentals of teaching and learning, including effective teaching methods, learning process, consideration of flight training syllabi, effective evaluations, and flight instructor responsibilities; the second section is concerned with the analysis of the flight maneuvers involved with Private Pilot, Commercial Pilot and Flight Instructor Certificates.

Total Credits 5

Pre/Corequisites

Corequisite PLT 164 Commercial Flight II

Prerequisite PLT 152 Commercial Flight I

PLT 172 Simulated Flight Lab IV

Course Information

Description	This course allows the student to practice and refine skills necessary to act as a Certified Flight Instructor. Emphasis on familiarization with sight picture flying in the right seat, teaching and demonstrating all required flight maneuvers simultaneously. This lab will assist the student in meeting the requirements to successfully pass the FAA exam for Certified Flight Instructor.
Total Credits	1

Pre/Corequisites

Corequisite	PLT 164 Commercial Flight II
Corequisite	PLT 168 Certified Flight Instruction
Prerequisite	PLT 152 Commercial Flight I

PLT 176 Certified Flight Instruction Lab

Course Information

Description	This course will provide practical teaching experience for the student during flight as they demonstrate skills flying in the right seat, teaching and demonstrating all required flight maneuvers simultaneously to successfully pass the FAA Practical Exam for Certified Flight Instructor.
Total Credits	1

Pre/Corequisites

Prerequisite	PLT 164 Commercial Flight II
--------------	------------------------------

PLT 180 Gas Turbine Engine Systems

Course Information

Description	This course will provide an in-depth examination of the turbine engine through the study of its development, theory of operation and the function of turbine engine components.
Total Credits	2

PNA 101 IV Therapy for LPN's

Course Information

Description	Prepares LPNs to perform activities as defined in KAR 60-16-102(b). Presents knowledge, skills, and competencies in the administration of intravenous fluid therapy, which will qualify LPNs to perform this procedure safely.
Total Credits	3

PNA 105 Adult Learning Principles for Health Careers

Course Information

Description	This course will provide learners with basic adult learning principles utilized in teaching. The course is intended to meet the requirements from the Kansas Department for Aging & Disability Services for instructors to teach Nurse Aide courses, and would also be of benefit the novice in higher education.
Total Credits	2

PNR 010 Nursing Recitation

Course Information

Description	Provides homework help and tutoring services and connects practical nurse students to a practical nurse instructor outside of general program class hours.
--------------------	--

PNR 119 KSPN Fundamentals of Pharmacology and Safe Medication Administration

Course Information

Description	This course provides an introduction to the principles of pharmacology. Emphasis is placed on nursing care related to the safe calculation and administration of medications to clients across the lifespan.
Total Credits	2

Pre/Corequisites

Prerequisite	ALH 110 Principles of Nutrition
Prerequisite	BIO 150 Human Anatomy & Physiology
Prerequisite	PSY 101 General Psychology
Prerequisite	PSY 120 Developmental Psychology
Prerequisite	PNR 136 Transition to Nursing
Corequisite	PNR 120 KSPN Foundations of Nursing
Corequisite	PNR 121 KSPN Foundations of Nursing Clinical
Corequisite	PNR 128 KSPN Nursing Care of Adults I
Corequisite	PNR 129 KSPN Nursing Care of Adults I Clinical

PNR 120 KSPN Foundations of Nursing

Course Information

Description	This course provides an introduction to practical nursing and roles of the practical nurse as well as profession- and client-related care concepts. Emphasis is placed on the knowledge and skills needed to provide safe, quality care. The theoretical foundation for basic data collection and nursing skills is presented and an introduction to the nursing process provides the student with a framework for decision making.
Total Credits	4

Pre/Corequisites

Prerequisite	ALH 110 Principles of Nutrition
Prerequisite	BIO 150 Human Anatomy & Physiology
Prerequisite	PSY 101 General Psychology
Prerequisite	PSY 120 Developmental Psychology
Prerequisite	PNR 136 Transition to Nursing
Corequisite	PNR 121 KSPN Foundations of Nursing Clinical

Corequisite	PNR 119 KSPN Fundamentals of Pharmacology and Safe Medication Administration
-------------	--

PNR 121 KSPN Foundations of Nursing Clinical

Course Information

Description This course provides an introduction to the skills required to practice nursing. The theoretical foundation for basic data collection and nursing skills is presented and the student is given an opportunity to demonstrate these skills in a clinical laboratory setting. Students are also given an opportunity to practice application of the nursing process to client-related situations.

Total Credits 2

Pre/Corequisites

Prerequisite	ALH 110 Principles of Nutrition
Prerequisite	BIO 150 Human Anatomy & Physiology
Prerequisite	PSY 101 General Psychology
Prerequisite	PSY 120 Developmental Psychology
Prerequisite	PNR 136 Transition to Nursing
Corequisite	PNR 120 KSPN Foundations of Nursing
Corequisite	PNR 119 KSPN Fundamentals of Pharmacology and Safe Medication Administration

PNR 128 KSPN Nursing Care of Adults I

Course Information

Description This course focuses on the care of adult clients experiencing common medical/surgical health alterations with predictable outcomes. Emphasis is placed on the care of clients with alterations in cardiac output and tissue perfusion, oxygenation, regulation and metabolism, and integument. Principles of pre-and post-operative care and IV therapy are also addressed.

Total Credits 5

Pre/Corequisites

Prerequisite	PNR 120 KSPN Foundations of Nursing
Prerequisite	PNR 121 KSPN Foundations of Nursing Clinical
Corequisite	PNR 119 KSPN Fundamentals of Pharmacology and Safe Medication Administration
Corequisite	PNR 129 KSPN Nursing Care of Adults I Clinical

PNR 129 KSPN Nursing Care of Adults I Clinical

Course Information

Description This course focuses on the care of adult clients with common medical/surgical health alterations. The clinical laboratory experience gives students the opportunity to apply theoretical concepts from Nursing Care of Adults I and implement safe client care in selected settings.

Total Credits 3

Pre/Corequisites

Prerequisite	PNR 120 KSPN Foundations of Nursing
Prerequisite	PNR 121 KSPN Foundations of Nursing Clinical
Corequisite	PNR 119 KSPN Fundamentals of Pharmacology and Safe Medication Administration
Corequisite	PNR 128 KSPN Nursing Care of Adults I

PNR 130 KSPN Maternal Child Nursing

Course Information

Description This course provides an integrative, family-centered approach to the care of childbearing women, newborns, and children. Emphasis is placed on the care of the pregnant woman and newborn, normal growth and development, and common pediatric disorders.

Total Credits 2

Pre/Corequisites

Prerequisite	PNR 120 KSPN Foundations of Nursing
Prerequisite	PNR 121 KSPN Foundations of Nursing Clinical
Prerequisite	PNR 119 KSPN Fundamentals of Pharmacology and Safe Medication Administration
Prerequisite	PNR 128 KSPN Nursing Care of Adults I
Prerequisite	PNR 129 KSPN Nursing Care of Adults I Clinical
Corequisite	PNR 138 KSPN Nursing Care of Adults II
Corequisite	PNR 139 KSPN Nursing Care of Adults II Clinical
Corequisite	PNR 131 KSPN Maternal Child Nursing Clinical
Corequisite	PNR 141 KSPN Care of Aging Adults
Corequisite	PNR 135 KSPN Mental Health Nursing
Corequisite	PNR 166 KSPN Leadership, Roles, and Issues

PNR 131 KSPN Maternal Child Nursing Clinical

Course Information

Description	This course provides an integrative, family-centered approach to the care of childbearing women, newborns, and children. Students are given the opportunity to observe the uncomplicated birth process and practice postpartum care as well as care of the newborn in the clinical laboratory setting. Common pediatric diseases and the growth and development process is the focus of child-related clinical laboratory experiences.
--------------------	--

Total Credits 1

Pre/Corequisites

Prerequisite	PNR 120 KSPN Foundations of Nursing
Prerequisite	PNR 121 KSPN Foundations of Nursing Clinical
Prerequisite	PNR 119 KSPN Fundamentals of Pharmacology and Safe Medication Administration
Prerequisite	PNR 128 KSPN Nursing Care of Adults I
Prerequisite	PNR 129 KSPN Nursing Care of Adults I Clinical

Corequisite	PNR 130 KSPN Maternal Child Nursing
Corequisite	PNR 138 KSPN Nursing Care of Adults II
Corequisite	PNR 139 KSPN Nursing Care of Adults II Clinical
Corequisite	PNR 141 KSPN Care of Aging Adults
Corequisite	PNR 135 KSPN Mental Health Nursing
Corequisite	PNR 166 KSPN Leadership, Roles, and Issues

PNR 135 KSPN Mental Health Nursing

Course Information

Description This course explores basic concepts and trends in mental health nursing. Therapeutic modalities and client behavior management are discussed. Emphasis is placed on using the nursing process and meeting the basic human needs of the client with a mental health disorder.

Total Credits 2

Pre/Corequisites

Prerequisite	PNR 120 KSPN Foundations of Nursing
Prerequisite	PNR 121 KSPN Foundations of Nursing Clinical
Prerequisite	PNR 119 KSPN Fundamentals of Pharmacology and Safe Medication Administration
Prerequisite	PNR 128 KSPN Nursing Care of Adults I
Prerequisite	PNR 129 KSPN Nursing Care of Adults I Clinical
Corequisite	PNR 130 KSPN Maternal Child Nursing
Corequisite	PNR 131 KSPN Maternal Child Nursing Clinical
Corequisite	PNR 138 KSPN Nursing Care of Adults II
Corequisite	PNR 139 KSPN Nursing Care of Adults II Clinical
Corequisite	PNR 141 KSPN Care of Aging Adults
Corequisite	PNR 166 KSPN Leadership, Roles, and Issues

PNR 136 Transition to Nursing

Course Information

Description	This course is designed to provide skills to enhance the success of the practical nurse student. It will include study skills, time management, social awareness skills, an introduction to critical thinking, APA format, review of PN policies and procedures, and learning in a hybrid/online format
Total Credits	2

Pre/Corequisites

Prerequisite	ALH 110 Principles of Nutrition
Prerequisite	BIO 150 Human Anatomy & Physiology
Prerequisite	PSY 101 General Psychology
Prerequisite	PSY 120 Developmental Psychology

PNR 138 KSPN Nursing Care of Adults II

Course Information

Description	This course focuses on the care of adult clients experiencing common medical/surgical health alterations with predictable outcomes. Emphasis is placed on the care of clients with alterations in cognition and sensation, mobility, elimination, immunity and hematology, and reproduction. Principles related to emergency preparedness are also addressed.
Total Credits	5

Pre/Corequisites

Prerequisite	PNR 120 KSPN Foundations of Nursing
Prerequisite	PNR 121 KSPN Foundations of Nursing Clinical
Prerequisite	PNR 119 KSPN Fundamentals of Pharmacology and Safe Medication Administration
Prerequisite	PNR 128 KSPN Nursing Care of Adults I
Prerequisite	PNR 129 KSPN Nursing Care of Adults I Clinical
Corequisite	PNR 139 KSPN Nursing Care of Adults II Clinical
Corequisite	PNR 130 KSPN Maternal Child Nursing
Corequisite	PNR 131 KSPN Maternal Child Nursing Clinical

Corequisite	PNR 135 KSPN Mental Health Nursing
Corequisite	PNR 141 KSPN Care of Aging Adults
Corequisite	PNR 166 KSPN Leadership, Roles, and Issues

PNR 139 KSPN Nursing Care of Adults II Clinical

Course Information

Description	This course focuses on the care of adult clients with common medical/surgical health problems. The clinical laboratory experience provides the student an opportunity to build on the theoretical concepts from Nursing Care of Adults I and II and implement safe client care in selected settings. Students are given the opportunity to practice leadership skills while managing a caseload of clients.
--------------------	---

Total Credits	2
----------------------	---

Pre/Corequisites

Prerequisite	PNR 120 KSPN Foundations of Nursing
Prerequisite	PNR 121 KSPN Foundations of Nursing Clinical
Prerequisite	PNR 119 KSPN Fundamentals of Pharmacology and Safe Medication Administration
Prerequisite	PNR 128 KSPN Nursing Care of Adults I
Prerequisite	PNR 129 KSPN Nursing Care of Adults I Clinical
Corequisite	PNR 138 KSPN Nursing Care of Adults II
Corequisite	PNR 130 KSPN Maternal Child Nursing
Corequisite	PNR 131 KSPN Maternal Child Nursing Clinical
Corequisite	PNR 135 KSPN Mental Health Nursing
Corequisite	PNR 141 KSPN Care of Aging Adults
Corequisite	PNR 166 KSPN Leadership, Roles, and Issues

PNR 141 KSPN Care of Aging Adults

Course Information

Description This course is designed to explore issues related to the aging adults. Course content addresses the impact of ageism, alterations in physiological and psychosocial functioning, and the role of the practical nurse in caring for older adult clients across a continuum of care.

Total Credits 2

Pre/Corequisites

Prerequisite	PNR 120 KSPN Foundations of Nursing
Prerequisite	PNR 121 KSPN Foundations of Nursing Clinical
Prerequisite	PNR 119 KSPN Fundamentals of Pharmacology and Safe Medication Administration
Prerequisite	PNR 128 KSPN Nursing Care of Adults I
Prerequisite	PNR 129 KSPN Nursing Care of Adults I Clinical
Corequisite	PNR 138 KSPN Nursing Care of Adults II
Corequisite	PNR 139 KSPN Nursing Care of Adults II Clinical
Corequisite	PNR 130 KSPN Maternal Child Nursing
Corequisite	PNR 131 KSPN Maternal Child Nursing Clinical
Corequisite	PNR 166 KSPN Leadership, Roles, and Issues
Corequisite	PNR 135 KSPN Mental Health Nursing

PNR 166 KSPN Leadership, Roles, and Issues

Course Information

Description This course provides orientation to leadership roles of the LPN and related responsibilities. It will introduce issues to the student they will encounter in the workplace.

Total Credits 2

Pre/Corequisites

Prerequisite	PNR 120 KSPN Foundations of Nursing
Prerequisite	PNR 121 KSPN Foundations of Nursing Clinical
Prerequisite	PNR 119 KSPN Fundamentals of Pharmacology and Safe Medication Administration

Prerequisite	PNR 128 KSPN Nursing Care of Adults I
Prerequisite	PNR 129 KSPN Nursing Care of Adults I Clinical
Corequisite	PNR 138 KSPN Nursing Care of Adults II
Corequisite	PNR 139 KSPN Nursing Care of Adults II Clinical
Corequisite	PNR 130 KSPN Maternal Child Nursing
Corequisite	PNR 131 KSPN Maternal Child Nursing Clinical
Corequisite	PNR 135 KSPN Mental Health Nursing
Corequisite	PNR 141 KSPN Care of Aging Adults

PNR 170 Healthcare Practice Management

Course Information

Description	This course explores the overall perspective of health service organizations and the associated managerial role. The student will be able to utilize practical building blocks for managerial growth. The student will discuss the involvement of future roles for healthcare providers and outside forces that impact management of a healthcare component.
--------------------	--

Total Credits	3
----------------------	---

Pre/Corequisites

Prerequisite	PNR 120 KSPN Foundations of Nursing
Prerequisite	PNR 121 KSPN Foundations of Nursing Clinicals
Prerequisite	PNR 122 KSPN Pharmacology
Prerequisite	PNR 123 KSPN Medical Surgical Nursing I
Prerequisite	PNR 124 KSPN Medical Surgical Nursing I Clinical
Prerequisite	PNR 126 KSPN Medical Surgical Nursing II
Prerequisite	PNR 127 KSPN Medical Surgical Nursing II Clinical
Prerequisite	PNR 130 KSPN Maternal Child Nursing
Prerequisite	PNR 131 KSPN Maternal Child Nursing Clinical
Prerequisite	PNR 132 KSPN Gerontology Nursing
Prerequisite	PNR 134 Role Development
Prerequisite	PNR 135 KSPN Mental Health Nursing

Prerequisite PNR 136 Transition to Nursing

PNR 175 Healthcare Management Research

Course Information

Description	This course explores management issues, funding and actual provision of healthcare by various entities. The student will research and discuss the role of management in healthcare. The student will complete projects that expand on specific areas of individual interest in administration and management.
Total Credits	4

Pre/Corequisites

Prerequisite	PNR 120 KSPN Foundations of Nursing
Prerequisite	PNR 121 KSPN Foundations of Nursing Clinicals
Prerequisite	PNR 122 KSPN Pharmacology
Prerequisite	PNR 123 KSPN Medical Surgical Nursing I
Prerequisite	PNR 124 KSPN Medical Surgical Nursing I Clinical
Prerequisite	PNR 126 KSPN Medical Surgical Nursing II
Prerequisite	PNR 127 KSPN Medical Surgical Nursing II Clinical
Prerequisite	PNR 130 KSPN Maternal Child Nursing
Prerequisite	PNR 131 KSPN Maternal Child Nursing Clinical
Prerequisite	PNR 132 KSPN Gerontology Nursing
Prerequisite	PNR 134 Role Development
Prerequisite	PNR 135 KSPN Mental Health Nursing
Prerequisite	PNR 136 Transition to Nursing

PNR 180 Healthcare Issues

Course Information

Description This course explores current issues in healthcare and the impact of those issues on society. The student will discuss specific pieces of legislation, regulatory initiatives, public concern issues, funding and actual provision of healthcare by various entities. The student will complete projects that expand on specific areas of individual interest.

Total Credits 3

Pre/Corequisites

Prerequisite	PNR 120 KSPN Foundations of Nursing
Prerequisite	PNR 121 KSPN Foundations of Nursing Clinicals
Prerequisite	PNR 122 KSPN Pharmacology
Prerequisite	PNR 123 KSPN Medical Surgical Nursing I
Prerequisite	PNR 124 KSPN Medical Surgical Nursing I Clinical
Prerequisite	PNR 126 KSPN Medical Surgical Nursing II
Prerequisite	PNR 127 KSPN Medical Surgical Nursing II Clinical
Prerequisite	PNR 130 KSPN Maternal Child Nursing
Prerequisite	PNR 131 KSPN Maternal Child Nursing Clinical
Prerequisite	PNR 132 KSPN Gerontology Nursing
Prerequisite	PNR 134 Role Development
Prerequisite	PNR 135 KSPN Mental Health Nursing
Prerequisite	PNR 136 Transition to Nursing

POL 101 American Government

Course Information

Description A general study of the development, structure and functions of the American National Government. Topics to be studied include an introduction to government, principles of constitutionalism and federalism, political parties and political behavior, the Presidency, congress, the judiciary and the federal bureaucracy, Of specific emphasis is an analysis of decision-making in government, public participation and influence in government as well as a study of specific problems concerning the operation of the federal government.

Total Credits 3

PSS 100 Six Sigma Yellow Belt

Course Information

Description Six Sigma Yellow Belt training introduces the fundamentals of Six Sigma to individual process owners and operators who can then act as team members on Six Sigma projects. Not only do these Yellow Belts gain the skills necessary to identify, monitor and control profit-eating practices in their own processes, but they are also prepared to feed that information to Green Belts and Black Belts working on larger system projects.

Total Credits 1

PSS 101 Six Sigma Green Belt Methods

Course Information

Description This course is designed to help the adult learner understand Six Sigma concepts and be able to apply their knowledge to a real problem. It also addresses the challenges of change management and data management.

Total Credits 3

PSS 105 Six Sigma Green Belt Statistics

Course Information

Description Students develop an in-depth understanding of how computers and statistical software are essential components in the business world and society in general for exploring data in depth, data simulation, screening data for errors, manipulating data, performing transformations, focus on the use of the computer and statistical software as a valuable productivity and data analysis tool.

Total Credits 3

Pre/Corequisites

Prerequisite PSS101 Six Sigma Green Belt Methods

PSS 115 Six Sigma Black Belt Methods

Course Information

Description The Six Sigma Black Belt Methods incorporates data and statistical analysis into a project based workflow that allows businesses to make intelligent decisions about where and how to incorporate improvements.

Total Credits 3

Pre/Corequisites

Prerequisite PSS101 Six Sigma Green Belt Methods

Prerequisite PSS105 Six Sigma Green Belt Statistics

PSS 120 Six Sigma Black Belt Experimentation & Transfer Function

Course Information

Description Students will learn how to manipulate data with statistical tools to transform it into valuable information (numeric and/or graphic). This data will be incorporated into a project.

Total Credits 3

Pre/Corequisites

Prerequisite PSS115 Six Sigma Black Belt Methods

PST 110 Private Security Officer Training - Basic

Course Information

Description	The Basic Private Security Officer Training (Basic PSOT) course is a 45 hour course designed to train Security Officers in basic duties and requirements of a security officer in compliance with the Wichita City Code.
Total Credits	3

PSY 101 General Psychology

Course Information

Description	A general introduction to the scientific study of behavior and mental processes to enable students to apply the knowledge they gain about the history of psychology, psychological perspectives, biological bases of behavior, sensation and perception, learning, cognition, intelligence, motivation, development, personality, psychological disorders and treatments of disorders, social psychology and critical thinking skills to enhance the quality of his/her life as he/she interacts with others and the environment.
Total Credits	3

PSY 110 Child Psychology

Course Information

Description	This course is a scientific study of child behavior and development from the prenatal period through adolescence. This includes special emphasis in topics of physical development, cognitive and language development, social-emotional development and attachment, socialization, and practical applications of discipline and child rearing.
Total Credits	3

Pre/Corequisites

Prerequisite	PSY 101 General Psychology
--------------	----------------------------

PSY 120 Developmental Psychology

Course Information

Description	A study of individual development from conception through death to enable students to apply the knowledge they gain about the general areas of biological, neurological, physical, cognitive, social, emotional and personality development at each stage of life to enhance more meaningful interactions with others and better understanding of his/herself.
Total Credits	3

Pre/Corequisites

Prerequisite	PSY 101 General Psychology
--------------	----------------------------

PSY 135 Social Science Prospectus

Course Information

Description	The social sciences provide various perspectives on how we view the behavior of individuals and society. The predominant research of individuals, families, and larger society is done through the scope of the social sciences, particularly psychology, geography, and sociology. In this class, students will examine the relevance of social science within historical and current issues, develop evidence-based questions about human behavior, and explore prevalent research approaches and their findings.
Total Credits	3

REL 101 New Testament

Course Information

Description	This course is an introduction to history, literature and culture that gave rise to the New Testament from an objective and analytical approach.
Total Credits	3

ROB 100 Introduction to Robotics

Course Information

Description	This course explores basic robotic concepts. Studies robots in typical application environments. Topics include: robot history and fundamentals, robot classification, power sources, robot applications in the workplace, robot control techniques, path control, end of arm tooling, robot operation and robot controllers, controller architecture in a system, robotic language programming, and human interface issues.
Total Credits	3

ROB 101 Manufacturing Control & Work Cell Interfacing AY 20/21 Teach Out

Course Information

Description	This course studies open and closed loop controls and cell level interfacing. Emphasizes human factors related to automated systems. Topics include: process control; sensors and interfacing; fluid pressure and level measurement; fluid flow instrument; instruments for temperature measurement; instruments for mechanical measurement; pneumatic controls; cell level interfacing; automatic control systems application; and human interface issues of operator training, acceptance, and safety.
Total Credits	2

Pre/Corequisites

Prerequisite	ROB 100 Introduction to Robotics
Prerequisite	IND 106 Direct & Alternating Current

ROB 102 Work Cell Design Laboratory AY 20/21 Teach Out

Course Information

Description	This course allows students to work in instructor-supervised teams, assembling and operating an automated production system's cell. Students will select equipment, write specifications, design fixtures and interconnects, integrate systems/provide interfaces, and operate the assigned system. Topics include: work cell requirement analysis, work cell specifications, work cell assembly, work cell programming, work cell debugging/troubleshooting, and prototype or demonstration work cell operation.
Total Credits	1

Pre/Corequisites

Prerequisite ROB101 Introduction to Robotics

ROB 103 Applied Robotics Lab I

Course Information

Description	In this course students will learn basic robotic applications and devices utilized in automated systems. Using hands on step by step approach students will program different types of robots and interface the robots and controllers within parameters defined by the instructor and the application.
Total Credits	4

Pre/Corequisites

Prerequisite ROB 104 Robotics Simulation

ROB 104 Robotics Simulation

Course Information

Description	This course provides the student an introduction to robotic simulation using industry current software. Students will learn to build computer simulated models of robotic work cells.
Total Credits	2

Pre/Corequisites

Prerequisite ROB 100 Introduction to Robotics

ROB 106 Robotics Controller Maintenance

Course Information

Description This course will provide the student with basic skills and techniques used in the maintenance and repair of robotic/automated equipment.

Total Credits 1

Pre/Corequisites

Prerequisite ROB 103 Applied Robotics Lab I

ROB 110 Applied Robotics Lab II AY 20/21 Teach Out

Course Information

Description In this course students will expand on their experiences from Applied Robotics Lab II. Students will further enhance the robotic applications and integration of PLC's and PC's to robot controllers.

Total Credits 3

Pre/Corequisites

Prerequisite ROB 103 Applied Robotics Lab I

Prerequisite ROB 102 Work Cell Design Laboratory

ROB 111 Advanced Robot Controller Programming AY 20/21 Teach Out

Course Information

Description	This course provides an opportunity for students to adapt robotic systems to specific manufacturing applications. Students will learn the file manipulation required to understand and program a complete robotic application.
Total Credits	2

Pre/Corequisites

Prerequisite	ROB 104 Robotics Simulation
--------------	-----------------------------

ROB 115 Introduction to Programming Robots in ROS

Course Information

Description	In this course students will become familiar with the basic programming languages used in Robotics; Python, Linux, and C++. Students will practice programming and applying different programs in the Robot Operating System (ROS) to help Robots move and interpret reference frames. The course will conclude with students applying their knowledge of the programming languages to the design and simulation of a robot.
Total Credits	4

Pre/Corequisites

Corequisite	MTH 112 College Algebra
-------------	-------------------------

ROB 118 Basic Circuits

Course Information

Description	This course introduces direct current (DC) concepts and applications and the theory and application of varying sense wave voltages and current. Topics include: electrical principles and laws; batteries; DC test equipment; series, parallel and simple combination circuits; magnetism, AC wave generation, AC test equipment, inductance, capacitance, and basic transformers, and laboratory procedures and safety practices.
Total Credits	3

Pre/Corequisites

Corequisite MTH 112 College Algebra

ROB 120 IoT Fundamentals: Introduction to the Internet of Things

Course Information

Description In this course, students learn about Internet of Things and how it enables Digital Transformation along with emerging technologies such as data analytics, artificial intelligence, and the increased attention on cybersecurity. Students will also understand the basics of Intent Based Networking that uses software-driven approach and machine learning to be able to connect and secure new devices with ease.

Total Credits 1

ROB 124 Robotic Navigation

Course Information

Description In this course, students will learn how to properly navigate robots using ROS. Navigation allows mobile robots to move around autonomously and an essential element in multiple industrial fields including warehousing, commercial, consumer, and entertainment. Students will learn the key components of ROS Navigation and how to use it in robot projects.

Total Credits 2

Pre/Corequisites

Prerequisite ROB 115 Introduction to Programming Robots in ROS

ROB 125 Advanced Industrial Workcell Programming AY 20/21 Teach Out

Course Information

Description	This course explores the fundamentals of work-cell integration and programming. The topics include integration of machine elements, motion control programming, and industrial control networks.
Total Credits	3

Pre/Corequisites

Prerequisite	ROB 111 Advanced Robot Controller Programming
Prerequisite	IND 131 Industrial Programmable Logic Controllers

ROB 128 Basic PLC

Course Information

Description	This course introduces operational theory, systems terminology, PLC installations, and programming procedures for programmable logic controls. Emphasis is placed on PLC programming, connections, installations, and start-up procedures. Topics include: PLC hardware and software, PLC functions and terminology, PLC installation and set up, PLC programming basics, relay logic instructions, timers and counters, connecting field devices to I/O cards, and PLC safety procedures.
Total Credits	3

Pre/Corequisites

Prerequisite	ROB 118 Basic Circuits
--------------	------------------------

ROB 130 IoT Fundamentals: Connected Things

Course Information

Description	This course will prepare students with the technical and soft skills needed to ideate, design, prototype, and present the business value of an end-to-end IoT solution. The typical end-to-end solution will include sensors and
--------------------	--

actuators, gateways, wired and wireless network connections and cloud services.

Total Credits 3

Pre/Corequisites

Prerequisite ROB 120 IoT Fundamentals: Introduction to the Internet of Things

ROB 134 Robotic Perception and Manipulation

Course Information

Description In this course, students will learn and become competent in the concepts necessary to get a robot to perceive and manipulate objects in their environment. This course teaches students how to utilize ROS Industrial to achieve these goals in various settings.

Total Credits 4

Pre/Corequisites

Prerequisite ROB 124 Robotic Navigation

ROB 138 Advanced PLC

Course Information

Description This course examines types, installation and troubleshooting of programmable logic controllers (PLC). Hardware and programming aspects, as well as ladder logic symbols and operations necessary to develop a PLC program are covered in this course.

Total Credits 3

Pre/Corequisites

Prerequisite ROB 128 Basic PLC

ROB 140 IoT Fundamentals: Big Data Analytics

Course Information

Description This course will continue to expand your skills in all aspects of IoT, focusing mainly on data analytics and Big Data Systems. It includes extensive hands-on labs to practice data acquisition from sensors and video cameras, data visualization and an introduction to Machine Learning. This path enhances the communication skills and business acumen of the students by teaching storytelling with data. It introduces the students to the field of Big Data engineering platforms. The capacity to leverage the data analytics in the IoT Solutions is strategically important for value creation and requires the development of specific data analysis skills that are extremely valuable in the market.

Total Credits 3

Pre/Corequisites

Prerequisite ROB 130 IoT Fundamentals: Connected Things

ROB 144 Machine Learning for Robotics

Course Information

Description In this course students will utilize Machine Learning to get robots to recognize images, be trained on randomly simulated environments, achieve level 3 autonomy, and operationalize a robot on the CUDA platform.

Total Credits 2

Pre/Corequisites

Prerequisite ROB 134 Robot Perception and Manipulation

ROB 145 Applied Robotics Lab II

Course Information

Description	In this course students will expand on their experiences from Applied Robotics Lab II. Students will further enhance the robotic applications and integration of PLC's and PC's to robot controllers.
Total Credits	2

Pre/Corequisites

Prerequisite	ROB 106 Robotics Controller Maintenance
--------------	---

ROB 148 PLC Systems Design and Simulation

Course Information

Description	This course provides a more advanced study of PLC's in manufacturing including Distributed Control Systems (DCS), Supervisory Control and Data Acquisition Systems (SCADA), and advanced programming languages.
Total Credits	3

Pre/Corequisites

Prerequisite	ROB 138 Advanced PLC
--------------	----------------------

ROB 150 IoT Fundamentals: Security

Course Information

Description	The explosive growth of connected IoT devices enables the digitization of industries, but also increases the exposure to security threats. Upon completion students will be able to perform vulnerability and risk assessments, and research and recommend risk mitigation strategies for common security threats in IoT systems.
Total Credits	3

Pre/Corequisites

Prerequisite	ROB 140 IoT Fundamentals: Big Data Analytics
--------------	--

ROB 155 Advanced Industrial Workcell Programming

Course Information

Description This course explores the fundamentals of work-cell integration and programming. The topics include integration of machine elements, motion control programming, and industrial control networks.

Total Credits 3

Pre/Corequisites

Prerequisite ROB 145 Applied Robotics Lab II

ROB 170 Robotics Internship

Course Information

Description The internship represents an educational strategy linking the classroom with the acquisition of knowledge in the workplace. Through direct observation, reflection and evaluation, students gain an insight into the internship site's work, mission, and audience, how these relate to their academic study, as well as the organization's position in the broader industry or field. Students will produce a critical reflection on their internship experience demonstrating how they have addressed specific learning goals.

Total Credits 3

Pre/Corequisites

Prerequisite ROB 134 Robotic Perception and Manipulation

Prerequisite ROB 145 Applied Robotics Lab II

Prerequisite ROB 138 Advanced PLC

Prerequisite ROB 140 IoT Fundamentals: Big Data Analytics

ROB 172 Robotics Capstone

Course Information

Description In this project-based course, students will apply the skills and knowledge acquired throughout the Digital Marketing program to a real-world project. In partnership with a local non-profit organization, students will create a digital marketing strategy designed to meet the customer needs. Students will produce a critical reflection on their capstone experience demonstrating how they have addressed specific learning goals. A successful project will include a project presentation to representatives of the non-profit organization, faculty and fellow students.

Total Credits 3

Pre/Corequisites

Prerequisite ROB 134 Robotic Perception and Manipulation
Prerequisite ROB 145 Applied Robotics Lab II
Prerequisite ROB 138 Advanced PLC
Prerequisite ROB 140 IoT Fundamentals: Big Data Analytics

SAF 101 Safety Orientation/OSHA 10

Course Information

Description This course provides a fundamental understanding of OSHA Safety for the Construction Industry. Students who successfully complete the course will be issued a Department of Labor (DOL) 10 hour card.

Total Credits 1

SAF 110 OSHA 510

Course Information

Description This course covers OSHA standards, policies, and procedures in the construction industry. Topics include scope and application of the OSHA Construction Standards, construction safety and health principles, and special emphasis on those areas in construction which are most hazardous.

Total Credits 2

SAF 130 OSHA 503 Update for General Industry Trainers

Course Information

Description This course is designed for Outreach Training Program trainers who have completed the OSHA 501 Trainer Course in Occupational Safety and Health Standards for General Industry and who are authorized trainers in the OSHA Outreach Training Program. The course provides students with updates on OSHA General Industry Standards and policy and regulations while offering opportunities to develop effective facilitation skills teaching the 10 and 30 hour General Industry Program classes. The OSHA 501 Trainer Course in Standard for the General Industry must be completed before taking this course.

Total Credits 1

SGT 101 Introduction to Surgical Technology

Course Information

Description This course introduces the role and functions of proper documentation, post and pre-operative case management, professional and self-management, professionalism, and work place management, scope of practice, patient care standards, death and dying issues, legal and ethics dilemma, risk management and safety, basic computer skills and electricity concepts.

Total Credits 4

Pre/Corequisites

Prerequisite	BIO 150 Human Anatomy & Physiology
Prerequisite	BIO 160 Microbiology
Prerequisite	CPR 101 CPR for Health Care Providers
Prerequisite	ALH 101 Medical Terminology
Prerequisite	ENG 101 Composition I

Prerequisite	MTH 101 Intermediate Algebra
Prerequisite	SOC 101 Principles of Sociology or PSY 101 General Psychology
Prerequisite	SPH 101 Public Speaking or SPH 111 Interpersonal Communications

SGT 107 Pharmacology for Surgical Technology

Course Information

Description	This course will provide general pharmacologic information, including how medications are measured, what kind of medications are used, what laws pertain to them, how they are labeled, how they are administered to the surgical patient, and an understanding of preoperative and intraoperative anesthesia as it relates to routine and emergency situations.
Total Credits	3

Pre/Corequisites

Prerequisite	SGT 101 Introduction to Surgical Technology
Prerequisite	SGT 115 Surgical Procedures I
Prerequisite	SGT 120 Principles and Practices in Surgical Technology
Prerequisite	SGT 140 Principles and Practices in Surgical Technology Lab

SGT 115 Surgical Procedures I

Course Information

Description	Coordinates study of theoretical and practical applications of various surgical procedures. Emphasis is placed on pathology, a methodical approach to surgical procedures and preparation and application of aseptic techniques with extensive laboratory experience to develop critical skills that are required to function in the operating room environment.
Total Credits	5

Pre/Corequisites

Corequisite	SGT120 Principles & Practices in Surgical Technology
-------------	--

SGT 119 Surgical Technology - Clinical Experience I

Course Information

Description	Coordinates study of theoretical and practical applications of various surgical procedures. Emphasis is placed on pathology, a methodical approach to surgical procedures and preparation and application of aseptic techniques with extensive laboratory experience to develop critical skills that are required to function in the operating room environment.
Total Credits	6

Pre/Corequisites

Prerequisite	SGT 101 Introduction to Surgical Technology
Prerequisite	SGT 115 Surgical Procedures I
Prerequisite	SGT 120 Principles & Practices in Surgical Technology
Prerequisite	SGT 140 Principles and Practices In Surgical Technology Lab

SGT 120 Principles and Practices in Surgical Technology

Course Information

Description	Presents concepts necessary to prepare students for clinical experience. Aseptic technique and supplies and equipment are major components of this course.
Total Credits	5

Pre/Corequisites

Corequisite	SGT 115 Surgical Procedures I
-------------	-------------------------------

SGT 125 Surgical Procedures II

Course Information

Description	Coordinates study of theoretical and practical applications of various surgical procedures. Emphasis is placed on pathology, a methodical approach to surgical procedures and preparation and application of aseptic techniques with extensive laboratory experience to develop critical skills that are required to function in the operating room environment.
Total Credits	5

Pre/Corequisites

Prerequisite	SGT 101 Introduction to Surgical Technology
Prerequisite	SGT 115 Surgical Procedures I
Prerequisite	SGT 120 Principles & Practices in Surgical Technology
Prerequisite	SGT 140 Principles & Practices in Surgical Technology Lab

SGT 129 Surgical Technology - Clinical Experience II

Course Information

Description	Students are assigned to supervised, non-remunerative clinical practice in hospital operating rooms approximately 24-27 hours per week. Emphasis is placed on basic and intermediate surgical interventions. Includes rotations through endoscopy and pre-operative holding units
Total Credits	7

Pre/Corequisites

Prerequisite	SGT 119 Surgical Technology - Clinical Experience I
Prerequisite	SGT 107 Pharmacology for Surgical Technology
Prerequisite	SGT 125 Surgical Procedures II

SGT 140 Principles and Practices in Surgical Technology Lab

Course Information

Description Students will demonstrate concepts necessary to prepare students for clinical experience. Aseptic technique and supplies and equipment are major components of this course.

Total Credits 3

Pre/Corequisites

Corequisite SGT 120 Principles & Practices in Surgical Technology

SGT 145 ST Certification Review

Course Information

Description This course provides a comprehensive review of surgical technology concepts and practical preparation for the national certification examination

Total Credits 1

Pre/Corequisites

Prerequisite SGT 101 Introduction to Surgical Technology
Prerequisite SGT 107 Pharmacology for Surgical Technology
Prerequisite SGT 115 Surgical Procedures I
Prerequisite SGT 119 Surgical Technology - Clinical Experience I
Prerequisite SGT 120 Principles & Practices in Surgical Technology
Prerequisite SGT 125 Surgical Procedures II
Prerequisite SGT 129 Surgical Technology - Clinical Experience II
Prerequisite SGT 140 Principles & Practices in Surgical Technology Lab

SMA 120 Sheetmetal Apprenticeship

Course Information

Description Students in this course will complete the course work and OJT required by the Joint Apprenticeship Training Committee.

Total Credits 47

SOC 101 Principles of Sociology

Course Information

Description An introductory study of human society to acquaint students with the influence and patterns of individual and group interaction by exploring the development, characteristics, and functioning of human groups; the relationships between groups, and group influences on individual behavior.

Total Credits 3

SOC 115 Social Problems

Course Information

Description This course will examine the major problems of contemporary society, the social causes, potential solutions, and impact on public policy utilizing sociological theories and perspectives. Students will acquire an understanding of unique issues such as, inequality, crime, deviance, violence, substance abuse, and problems within socialization institutions.

Total Credits 3

Pre/Corequisites

Prerequisite SOC 101 Introduction to Sociology

SPH 101 Public Speaking

Course Information

Description Covers fundamental basics to all good private and public speaking experiences and elements in voice production and improvement, bodily movement, confidence, poise and understanding of all types of public speeches. Required of all transfer curricula.

Total Credits 3

SPH 111 Interpersonal Communication

Course Information

Description Improves individual communication skills. By understanding the elements of effective communication, students are able to create environments that bring out the best in themselves and others. In addition, students learn how to better turn ideas and feelings into words, how to listen more effectively, respond more appropriately to what others have said and, most important of all, how to maintain and develop good interpersonal relationships with their families, their peers and fellow workers. Emphasis is placed on small-group activities, interviewing skills and verbal and non-verbal communication.

Total Credits 3

TAS 121 Engine Repair

Course Information

Description This course contains competencies that can be used in their entirety within a single course or as needed for courses designed by a Kansas institution as Institutional Flexible Credit. Through a variety of learning and assessment activities students can: explore the theory and operation of internal combustion engine; demonstrate the ability to remove an automotive engine; demonstrate the ability to install an automotive engine; demonstrate the basic ability to inspect and repair cylinder head, valve trains and timing defects; demonstrate the ability to disassemble short block; demonstrate the ability to inspect short block; demonstrate the ability to repair short block; demonstrate the ability to reassemble short block; demonstrate the basic ability to inspect and repair engine lubrication; demonstrate the basic ability to inspect and repair engine cooling systems; inspect a cylinder head and valve train; repair a cylinder head and valve train; perform advanced level engine diagnosis.

Total Credits 4

TAS 124 Electrical I

Course Information

Description	In this course students will: Complete service work orders; describe the relationship between voltage, ohms and amperage; perform basic electrical circuit repairs; identify electrical system faults; identify basic wiring diagram symbols, components, and legend information; perform basic electrical circuit measurements using a DVOM; describe basic circuit characteristics of series, parallel and series parallel circuits through a variety of classroom and shop learning and assessment activities.
Total Credits	3

TAS 125 Electrical II

Course Information

Description	In this course students will: Perform battery diagnosis; perform battery service; perform starting system diagnosis; perform starting system repair; perform charging system diagnosis; perform charging system repair; identify current flow on starting and charging system diagrams through a variety of learning and assessment activities.
Total Credits	5

Pre/Corequisites

Prerequisite	TAS 124 Electrical I
--------------	----------------------

TAS 126 Manual Transmission/Transaxle & Drive Train

Course Information

Description	This course contains competencies that can be used in their entirety within a single course or as needed for courses designed by a Kansas institution as Institutional Flexible Credit. Through a variety of learning and assessment activities students can: determine the general drive train diagnosis procedures; explore the fundamentals of clutch operation; explore the
--------------------	---

fundamentals of clutch removal, inspection and repair; determine the powerflow of the manual transmission and transaxle; perform fundamental manual transmission and transaxle inspection and repair according to service specifications; perform fundamental differential inspection and repair according to service specifications; perform fundamental diagnosis, inspection and replacement of drive axle shafts and supporting components; perform fundamental diagnosis, inspection, adjustment and repair of four- and all-wheel drive components; diagnose drive train issues; diagnose clutch concerns; perform the removal, inspection and/or repair of the clutch and its components; conduct a transmission and transaxle inspection and repair according to service specifications; conduct a differential inspection and repair according to service specifications; conduct the diagnosis, inspection and replacement of drive axle shafts and supporting components; conduct the diagnosis, inspection, adjustment and repair of four- and all-wheel drive components.

Total Credits 4

TAS 127 Automatic Transmission Repair

Course Information

Description This course contains competencies that can be used in their entirety within a single course or as needed for courses designed by a Kansas institution as Institutional Flexible Credit. Through a variety of learning and assessment activities students can: explore the concept of theory and operation of automatic transmissions/transaxles; perform maintenance on an automatic transmission/transaxle; perform service on an automatic transmission/transaxle; diagnose automatic transmission/transaxles; inspect automatic transmission/transaxles; remove and reinstall automatic transmission; remove and reinstall automatic transaxles; disassemble automatic transmission and components; disassemble automatic transaxles and components; inspect automatic transmission components; inspect automatic transaxles and components; repair automatic transmission and components; repair automatic transaxles and components; reassemble automatic transmission and components; reassemble automatic transaxles and components.

Total Credits 4

TAS 128 Heating & Air Conditioning

Course Information

Description	This course contains competencies that can be used in their entirety within a single course or as needed for courses designed by a Kansas institution as Institutional Flexible Credit. Through a variety of learning and assessment activities students can: explore the fundamentals of automotive HVAC operations and environmental concerns; identify the appropriate refrigerant recovery and recycling guidelines; service refrigerant, recycling and handling systems; document fundamental heating and air conditioning system concerns; perform fundamental diagnostics of A/C systems; perform fundamental diagnostics of refrigeration systems components; perform fundamental repairs of refrigeration systems components; perform fundamental diagnostics of heating, ventilation, and engine cooling systems; perform fundamental repairs of heating, ventilation, and engine cooling systems; perform fundamental diagnostics of operating systems and related controls; perform fundamental repairs of operating systems and related controls; perform complex diagnostics of A/C Systems; document complex heating and air conditioning system concerns; perform complex diagnostics of refrigeration system components; perform complex repairs of refrigeration system components; perform complex diagnostics of heating, ventilation, and engine cooling systems.
Total Credits	4

TAS 131 Engine Performance I

Course Information

Description	In this learning plan students will: complete work order and check history; identify engine mechanical integrity; explore the fundamentals of fuel system theory; identify fuel system concerns; explore the fundamentals of ignition theory; identify ignition system concerns; identify induction system concerns; identify exhaust system concerns; identify engine mechanical integrity through a variety of learning and assessment activities.
Total Credits	3

TAS 132 Engine Performance II

Course Information

Description This course contains competencies that can be used in their entirety within a single course or as needed for courses designed by a Kansas institution as Institutional Flexible Credit. Through a variety of learning and assessment activities students can: analyze engine mechanical integrity; analyze fuel system concerns; analyze ignition system concerns; analyze induction system concerns; analyze exhaust system concerns; service fuel system concerns; repair fuel system concerns; service ignition system concerns; repair ignition system concerns; service induction system concerns; service exhaust system concerns; repair induction system concerns; repair exhaust system concerns.

Total Credits 5

Pre/Corequisites

Prerequisite TAS 131 Engine Performance I

TAS 133 Brakes I

Course Information

Description This course is a thorough and detailed study of brake system theory and functional operation and principles of hydraulic systems as it applies to braking system operation. Practical applications of all phases of brake work including complete system service of disc and drum brake systems, parking brake systems, power assist devices and machining of brake disc and drum.

Total Credits 3

TAS 134 Brakes II

Course Information

Description In this course students will: Determine necessary brake system correction; Conduct system pressure tests utilizing service specifications; Perform diagnosis and correction for poor stopping, pulling or dragging concerns caused by malfunctions in the hydraulic system; Conduct inspection, fabrication and/or replacement of brake lines and hoses; Diagnose poor stopping noise vibration, pulling, grabbing, dragging or pedal pulsation

concerns; Perform service specifications pertaining to the removal, cleaning and refinishing procedures on brake drums; Perform drum brake repair and replacement procedures; Diagnose poor stopping noise vibration, pulling, grabbing, dragging or pedal pulsation concerns; Perform disc brake repair and replacement procedures; Machine rotor according to service specifications; Perform caliper piston retraction where applicable; Inspect and test power assist systems; Determine necessary action on wheel bearing noise, wheel shimmy and vibration concern diagnoses; Perform the removal, inspection and replacement of bearing and hub assemblies through a variety of classroom and lab/shop learning and assessment activities.

Total Credits 1

Pre/Corequisites

Prerequisite TAS 133 Brakes I

TAS 135 Automotive Computer Systems

Course Information

Description In this course students will: Perform automotive computer system diagnosis; perform vehicle communication diagnosis; perform engine computer system diagnosis; transmission computer diagnosis; perform air bag system diagnosis; perform heating and air conditioning electronic diagnosing; perform electronic anti-lock brake/traction/stability diagnosis; perform driver assistance system diagnosis; identify computer systems through a variety of learning and assessment activities.

Total Credits 3

TAS 136 Suspension and Steering I

Course Information

Description In this course students will: document fundamental suspension system concerns; perform fundamental diagnostics of steering systems; perform fundamental repairs of steering systems; perform fundamental diagnostics of suspension systems; perform fundamental repairs of suspension

systems; determine the need for wheel alignment and adjustment; perform fundamental diagnostics of wheel and tire systems; perform fundamental repairs of wheel and tire systems through a variety of learning and assessment activities.

Total Credits 3

TAS 137 Suspension and Steering II

Course Information

Description In this, course students will: gain knowledge in the use of alignment geometry and computerized alignment equipment to diagnose and repair steering suspension problems and to verify that a vehicle's suspension and steering components are within manufacturer's specifications. In addition, removing and replacing steering and suspension components according to manufacturer's specifications, inspecting, servicing, and repairing wheel and tire assemblies for optimum performance.

Total Credits 2

Pre/Corequisites

Prerequisite TAS 136 Suspension & Steering I

TAS 140 Diesel Engine Repair

Course Information

Description This course will introduce students to the theory and operation of a diesel internal combustion engine. Students will learn how to install, remove, inspect and repair a diesel engine.

Total Credits 4

TAS 142 Diesel Engine Performance

Course Information

Description	This course will introduce students to diesel engine mechanical integrity, diesel fuel systems, diesel induction systems, and diesel exhaust systems. Students will learn how to service and repair diesel fuel systems, diesel induction systems, and diesel exhaust systems.
Total Credits	5

TAS 145 Automotive Service Internship

Course Information

Description	The internship represents an educational strategy linking the classroom with the acquisition of knowledge in the workplace. Through direct observation, reflection and evaluation, students gain an insight into the internship site's work, mission, and audience, how these relate to their academic study, as well as the organization's position in the broader industry or field. Students will produce a critical reflection on their internship experience demonstrating how they have addressed specific learning goals.
Total Credits	3

TFF 110 Tap and Die

Course Information

Description	This course provides knowledge and technical skills on taps and dies. Topics include 60 degree thread form, common fastener thread series and markings on taps. The student will learn the process of hand tapping, the process of repairing a thread with a threading die and the process of installing a threaded insert.
Total Credits	1

Pre/Corequisites

Prerequisite	AER 106 Aerospace Manufacturing Tooling Orientation
--------------	---

TFF 115 Hand and Power Tools for Aerospace Tooling

Course Information

Description This course provides technical knowledge on hand power tools used by a toolmaker in the aerospace industry. The student will learn about die grinders, disco grinders and magnetic drills.

Total Credits 1

Pre/Corequisites

Prerequisite TFF 110 Tap & Die

TFF 120 Metrology

Course Information

Description Students will learn the proper operation, field verification, and measuring techniques utilized in precision machining, manufacturing, and tooling in this course. The course will also expose the student to software applications used in the industry. Measuring instruments will be covered in Primary standards, Flexible Measuring Instruments, Support and Layout, Height Measuring Tools, and Laser Tracking and Romer Arm usage and software.

Total Credits 4

Pre/Corequisites

Prerequisite MCD 106 Precision Measuring

TFF 125 Tooling Capstone

Course Information

Description This course provides the specific technical knowledge and skills necessary to utilize hand and power tools to create a drill jig. This course emphasizes the

importance of critical features, the process of permanent assembly and the role of toolmakers in the manufacturing environment.

Total Credits 4

Pre/Corequisites

Prerequisite TFF 115 Hand and Power Tools for Aerospace Tooling

Prerequisite AER 150 Assembly Overview I

TFF 135 Direct & Alternating Current

Course Information

Description This course introduces direct current (DC) concepts and applications and the theory and application of varying sense wave voltages and current. Topics include: electrical principles and laws; batteries; DC test equipment; series, parallel and simple combination circuits; magnetism, AC wave generation, AC test equipment, inductance, capacitance, and basic transformers, and laboratory procedures and safety practices.

Total Credits 4

Pre/Corequisites

Prerequisite AVC 110 Safety/OSHA

TFF 150 Fixture Construction

Course Information

Description In this course, students will have the opportunity to link classroom/lab theory with an experimental learning opportunity. Through direct observation, reflection and evaluation, students gain an insight into the internship site's work, mission, and audience, how these relate to their academic study, as well as the organization's position in the broader industry or field. Students will produce a critical reflection on their

internship experience demonstrating how they have addressed specific learning goals.

Total Credits 5

TFF 155 Tooling and Fixture Fabrication Capstone

Course Information

Description In this project-based course, students will apply the skills and knowledge acquired throughout the Tooling Fixture Fabrication program to a real-world project. In partnership with industry, students will fabricate a tooling fixture designed to meet the customer needs. Students will produce a critical reflection on their capstone experience demonstrating how they have addressed specific learning goals. A successful project will include a project presentation to faculty and fellow students.

Total Credits 5

THR 100 Theatre Appreciation

Course Information

Description Upon completion of this class, the student will know the origin of theater, as well as the major historical periods of theatrical development including Greek, Medieval and Shakespearian. Students will acquire a basic understanding of different aspects of theater and play production, including an awareness of technical theater, designing for the stage, dramatic literature and structure. The student will become familiar with what constitutes quality acting and playwriting.

Total Credits 3

UAS 105 Fundamentals of Drone Technology

Course Information

Description This course will provide an introduction into the world Unmanned Aerial Vehicles and systems which support UAVs. Students will gain an

understanding of the necessary knowledge and skills to become a drone certified pilot as well as the necessary items to successfully complete a drone task safely.

Total Credits 2

UAS 110 AC/DC

Course Information

Description This course introduces direct current (DC) concepts and applications and the theory and application of varying sine wave voltages and current. Topics include electrical principles and laws; batteries; DC test equipment; series, parallel and simple combination circuits; magnetism, AC wave generation, AC test equipment, inductance, capacitance, basic transformers, and laboratory procedures and safety practices.

Total Credits 4

UAS 115 Ground School

Course Information

Description The course will enable the student to demonstrate the knowledge required by CFR 61.105 (b). Knowledge areas of emphasis are FAA regulations, accident reporting, chart usage, navigation, radio communications, weather, collision avoidance, aerodynamics, systems, weight and balance, stall awareness, aeronautical decision making, preflight and ground operations.

Total Credits 3

UAS 120 Communication/Navigation

Course Information

Description	The course provides an understanding of the capabilities and limitations of UAS technology to include the hardware and software inclusions and gain a holistic view of concerns facing UAS integration into the National Airspace.
--------------------	--

Total Credits	3
----------------------	---

Pre/Corequisites

Prerequisite	UAS 105 Fundamentals of Drone Technology
Prerequisite	UAS 115 Ground School

UAS 125 GIS I

Course Information

Description	In this course, students will gain understanding of GIS concepts with vector and raster data models. Students will then move into geospatial data acquisition, editing the data, and appropriate management of the data. Students will then learn to display geospatial data and begin basic exploration of geospatial data. Students will practice these skills with real world data sets and challenges located throughout the course.
--------------------	--

Total Credits	3
----------------------	---

Pre/Corequisites

Prerequisite	UAS 105 Fundamentals of Drone Technology
Prerequisite	UAS 115 Ground School

UAS 130 MultiRotor I

Course Information

Description	The course objective is to understand how unmanned aircraft are used to accomplish a variety of tasks in a complex environment and how remote pilots apply UAS technology for commercial, scientific, and governmental purposes while respecting both the physical and regulatory limitations. Additionally, this course creates a foundation for the concept of professionalism and ethics as they apply to remote pilots.
--------------------	---

Total Credits 3

Pre/Corequisites

Prerequisite UAS105 Fundamentals of Drone Technology
Prerequisite UAS 115 Ground School

UAS 135 Flight Planning

Course Information

Description In this course, students will practice planning and executing several case studies involving UAS. Flight plans, FAA filing, maintenance logs, data collection, data processing, and final product presentation will be prepared for each case study. Case studies will be pulled from Agriculture, Transportation, Insurance, Marketing, and Public Utilities/Planning.

Total Credits 2

Pre/Corequisites

Corequisite UAS 125 GIS I
Corequisite UAS 130 MultiRotor I

UAS 140 MultiRotor II

Course Information

Description The course objective is to understand the limits and skills employed by professional remote pilots in trapping and mitigating errors and analyzing human error and management skills used to detect and stop errors during the day-to-day execution of remote pilot tasks. Additionally, this course explores the concepts of decision-making bias, stress, and methods for safely identifying and mitigating risk while making time critical decisions.

Total Credits 3

Pre/Corequisites

Prerequisite UAS 130 MultiRotor I

UAS 145 GIS II

Course Information

Description This course continues developing students' skills using GIS but focuses more on the analysis and use of GIS. Students will analyze both vector and raster data, map and analyze terrain, watershed analysis, spatial interpolation, geocoding and dynamic segmentation, network analysis, and build/develop GIS models.

Total Credits 3

Pre/Corequisites

Prerequisite UAS 125 GSI I
Prerequisite MTH 112 College Algebra

UAS 150 Photogrammetry

Course Information

Description Understand the fundamentals of digital photogrammetry. Be able to relate ground and image coordinates mathematically. Be able to rectify and orthorectify a frame image to a reference coordinate system. Understand and carry out a task to build a 3D model from stereo images. Appreciate other related photogrammetric algorithms, operations, and products.

Total Credits 3

Pre/Corequisites

Prerequisite MTH 112 College Algebra
Prerequisite UAS 125 GIS I

UAS 155 Sensor Packages

Course Information

Description This course gives students a more in-depth look into the theory, operation, and application of standard and cutting-edge sensors for UAS platforms. Students will work through several case studies and practice choosing appropriate sensors, integrating them into a UAS platform, executing the mission, and producing value-added products for that particular customer.

Total Credits 4

Pre/Corequisites

Prerequisite MTH 112 College Algebra

UAS 160 Design and Programming

Course Information

Description The mission influences the design of any UAS system it is to complete. To correctly choose a platform to accomplish the mission most effectively, students must understand UAS Airframe, UAS Powerplants, UAS Electrical system, and UAS Sensor Systems. This course will help students understand each of these variables' design parameters and provide opportunities to design and build UAS platforms based on different missions.

Total Credits 4

Pre/Corequisites

Prerequisite MTH 112 College Algebra

UAS 165 FixedWing UAS Flight

Course Information

Description In this course, students learn how fixed-wing, unmanned aircraft accomplish various tasks in a complex environment and how remote pilots apply UAS technology for commercial, scientific, and governmental purposes while respecting both the physical and regulatory limitations.

Additionally, this course creates opportunities for students to practice flying fixed-wing UAS to accomplish missions across various industry fields.

Total Credits 3

Pre/Corequisites

Prerequisite UAS 140 MultiRotor II

UAS 173 UAS Capstone

Course Information

Description In this project-based course, students will apply the skills and knowledge acquired throughout the Drone Technology program to a real-world UAS project. Industry application areas will include Agriculture, Reconnaissance/Emergency Response, Industrial Inspections, Remote Sensing Applications and more. Students will produce a critical reflection on their capstone experience demonstrating how they have addressed specific learning goals. A successful project will include a project presentation to representatives of industry, faculty and fellow students.

Total Credits 4

Pre/Corequisites

Prerequisite UAS 140 Multirotor II

Prerequisite UAS 145 GIS II

Prerequisite UAS 150 Photogrammetry

UAS 175 UAS Internship

Course Information

Description The internship represents an educational strategy linking the classroom with the acquisition of knowledge in the workplace. Through direct observation, reflection and evaluation, students gain an insight into the internship site's work, mission, and audience, how these relate to their academic study, as well as the organization's position in the broader industry or field. Students will produce a critical reflection on their

internship experience demonstrating how they have addressed specific learning goals.

Total Credits 4

Pre/Corequisites

Prerequisite	UAS 140 Multirotor II
Prerequisite	UAS 145 GIS II
Prerequisite	UAS 150 Photogrammetry

VET 101 Introduction to Veterinary Nursing

Course Information

Description	This course will introduce learners to the field of veterinary medicine, focusing on the specific roles and responsibilities of the veterinary nurse. Learners will be introduced to the historical aspects of veterinary medicine and the duties of the nurse including ethics, common animal breeds, safety, and first aid. This course also introduces the basic principles of nursing care, including clear and compassionate communication with owners. This course also gives a basic overview of medical terminology, anatomy/physiology and pathology. It will also introduce the basic principles of animal science, specifically as they relate to the role of a veterinary nurse.
--------------------	--

Total Credits 3

Pre/Corequisites

Prerequisite	BIO 110 Principles of Biology
Prerequisite	SPH 101 Public Speaking OR SPH 111 Interpersonal Communication
Prerequisite	MTH 101 Intermediate Algebra
Prerequisite	CHM 110 General Chemistry
Prerequisite	ENG 101 Composition I
Corequisite	VET 110 Veterinary Anatomy and Physiology
Corequisite	VET 115 Veterinary Clinical Pathology I OR VET 116 Laboratory and Diagnostic Skills and VET 117 Veterinary Clinical Pathology I Part 2
Corequisite	VET 140 Veterinary Pharmacology OR VET 141 Veterinary Assisting III and VET 142 Veterinary Pharmacology Part 2

VET 102 Introduction to Veterinary Assisting/Animal Science

Course Information

Description This course will introduce learners to the field of veterinary medicine and animal science, focusing on the specific roles and responsibilities of the veterinary assistant. Learners will be introduced to the basic principles of animal handling and care, common animal breeds, safety in the veterinary setting and first aid. This course also gives an overview of veterinary medical terminology.

Total Credits 1

VET 103 Introduction to Veterinary Nursing Part 2

Course Information

Description Intro to Veterinary Nursing: This course is designed for students who have completed VET 102 Introduction to Veterinary Assisting/Animal Science and have been accepted into the Veterinary Nursing program. This course will introduce learners to the field of veterinary medicine, focusing on specific roles and responsibilities of the veterinary technician. Students will be introduced to the historical aspects of veterinary medicine and the duties of the technician including ethics. This course introduces the basic principles of nursing care, including clear and compassionate communication with owners. This course also gives a basic overview of medical terminology, anatomy/physiology, and pathology. It will introduce the basic principles of animal science, specifically as they relate to the role of the veterinary technician.

Total Credits 2

Pre/Corequisites

Prerequisite	VET 102 Introduction to Veterinary Assisting/Animal Science
Prerequisite	BIO 110 Principles of Biology
Prerequisite	SPH 101 Public Speaking OR SPH 111 Interpersonal Communication
Prerequisite	MTH 101 Intermediate Algebra
Prerequisite	CHM 110 General Chemistry
Prerequisite	ENG 101 Composition I

Corequisite	VET 110 Veterinary Anatomy and Physiology
Corequisite	VET 115 Veterinary Clinical Pathology I OR VET 116 Laboratory and Diagnostic Skills and VET 117 Veterinary Clinical Pathology I Part 2
Corequisite	VET 140 Veterinary Pharmacology Or VET 141 Veterinary Assisting III and VET 142 Veterinary Pharmacology Part 2

VET 105 Veterinary Business Procedures/Office Management

Course Information

Description This course will introduce learners to the expectations of veterinary nurses including: veterinary medical records, admitting procedures, and record maintenance via hands on experiences. It will cover basic bookkeeping skills, inventory control measures, marketing, scheduling, interpersonal communication, phone etiquette, professionalism, working with difficult owners/animals, and the use of computer software specifically designed for use in veterinary clinics and hospitals.

Total Credits 2

Pre/Corequisites

Prerequisite	BIO 110 Principles of Biology
Prerequisite	MTH 101 Intermediate Algebra
Prerequisite	SPH 101 Public Speaking OR SPH 111 Interpersonal Communication
Prerequisite	CHM 110 General Chemistry

VET 106 Veterinary Practice Management

Course Information

Description This course will introduce learners to the management of a veterinary clinical setting. It will cover duties of the receptionist and front desk, telephone etiquette, scheduling and client communication. The learner will gain hands on experience in veterinary record keeping, filing and office inventory techniques.

Total Credits 1

VET 107 Veterinary Business Procedures/Office Management Part 2

Course Information

Description This course is designed for students who have completed VET 106 Veterinary Practice Management and have been accepted into the Veterinary Nursing program. This course will introduce learners to the expectations of veterinary technicians including veterinary medical records, admitting procedures, and record maintenance via hands-on experience. It will cover basic bookkeeping skills, inventory control measures, marketing, scheduling interpersonal communication, phone etiquette, professionalism, working with difficult owners and animals, and the use of computer software specifically designed for use in veterinary clinics and hospitals.

Total Credits 1

Pre/Corequisites

Prerequisite	VET 106 Veterinary Practice Management
Prerequisite	BIO 110 Principles of Biology
Prerequisite	MTH 101 Intermediate Algebra
Prerequisite	SPH 101 Public Speaking OR SPH 111 Interpersonal Communication
Prerequisite	CHM 110 General Chemistry

VET 110 Veterinary Anatomy and Physiology

Course Information

Description This course will introduce veterinary medical terminology, including prefix, suffix, root words, common medical terms, and a basic knowledge of word construction. This course will relate the relevant medical terminology to the structure and function of animal bodies and the anatomical/physiological differences between selected species. Learners will examine body organization, cellular biology, histology, and gross anatomy/physiology of the integumentary, skeletal, muscular, endocrine, reproductive,

cardiovascular, lymphatic, digestive, respiratory, urinary, and nervous systems. Lab will include the use of skeletons, models, virtual anatomy tools, and dissection of cadavers.

Total Credits 4

Pre/Corequisites

Prerequisite	BIO 110 Principles of Biology
Prerequisite	MTH 101 Intermediate Algebra
Prerequisite	CHM 110 General Chemistry
Prerequisite	SPH 101 Public Speaking OR SPH 111 Interpersonal Communication
Prerequisite	ENG 101 Composition I
Corequisite	VET 101 Introduction to Veterinary Technology/Principles of Animal Sciences OR VET 102 Introduction to Veterinary Assisting/Animal Science and VET 103 Introduction to Veterinary Nursing Part 2
Corequisite	VET 115 Veterinary Clinical Pathology I OR VET 116 Laboratory and Diagnostic Skills and VET 117 Veterinary Clinical Pathology I Part 2
Corequisite	VET 140 Veterinary Pharmacology OR VET 141 Veterinary Assisting III and VET 142 Veterinary Pharmacology Part 2

VET 115 Veterinary Clinical Pathology I

Course Information

Description	This course is the first of a three course series and will introduce basic pathological processes and prepare the learner for the next course in the sequence. This course builds upon veterinary pharmacology and introduces clinical microbiology and cytology as it relates to veterinary nursing and animal pathology. It covers the basic principles of microbial classification, growth, and pathogenicity as well as various laboratory methods used in identification of microorganisms as they relate to pathology and parasitology in animals.
--------------------	--

Total Credits 3

Pre/Corequisites

Prerequisite	BIO 110 Principles of Biology
--------------	-------------------------------

Prerequisite	MTH 101 Intermediate Algebra
Prerequisite	SPH 101 Public Speaking OR SPH 111 Interpersonal Communication
Prerequisite	CHM 110 General Chemistry
Prerequisite	ENG 101 Composition I
Corequisite	VET 101 Introduction to Veterinary Nursing Or VET 102 Introduction to Veterinary Assisting/Animal Science and VET 103 Introduction to Veterinary Nursing Part 2
Corequisite	VET 110 Veterinary Anatomy and Physiology
Corequisite	VET 140 Veterinary Pharmacology OR VET 141 Veterinary Assisting III and VET 142 Veterinary Pharmacology Part 2

VET 116 Laboratory and Diagnostic Skills

Course Information

Description	This course will expose the learner to basic veterinary laboratory techniques including sample collection and testing. The student will also be exposed to the safety measures employed in radiology. The student will gain hands on experience with animal handling in the lab and radiology setting.
Total Credits	1

Pre/Corequisites

Prerequisite	VET 141 Veterinary Assisting II
--------------	---------------------------------

VET 117 Veterinary Clinical Pathology I Part 2

Course Information

Description	This course is designed for students who have completed VET 116 Laboratory and Diagnostic Skills and have been accepted into the Veterinary Nursing program. This course is the first of a three-course series and will introduce basic pathological processes and prepare the learner for the next course in the sequence. This course builds upon veterinary pharmacology and introduces clinical microbiology and cytology as it relates to veterinary
--------------------	---

technology and animal pathology. It covers the basic principles of microbial classification, growth, and pathogenicity as well as various laboratory methods used in identification of microorganisms as they relate to pathology and parasitology in animals.

Total Credits 2

Pre/Corequisites

Prerequisite	BIO 110 Principles of Biology
Prerequisite	MTH 101 Intermediate Algebra
Prerequisite	SPH 101 Public Speaking OR SPH 111 Interpersonal Communication
Prerequisite	CHM 110 General Chemistry
Prerequisite	ENG 101 Composition I
Corequisite	VET 140 Veterinary Pharmacology Or VET 141 Veterinary Assisting II and VET 142 Veterinary Pharmacology Part 2
Corequisite	VET 110 Veterinary Anatomy and Physiology
Corequisite	VET 101 Introduction to Veterinary Nursing Or VET 102 Introduction to Veterinary Assisting/Animal Science and VET 103 Introduction to Veterinary Nursing Part 2

VET 120 Veterinary Nursing Procedures I

Course Information

Description	This course is the first of a two course series and will explore animal nutrition, patient assessment, animal therapeutics, animal husbandry, animal restraint, animal behavior and common dental problems and dental prophylaxis. Learners will get hands on experience in the collection of various diagnostic samples and preparation for collection.
--------------------	--

Total Credits 3

Pre/Corequisites

Prerequisite	VET 101 Introduction to Veterinary Nursing Or VET 102 Introduction to Veterinary Assisting/Animal Science and VET 103 Introduction to Veterinary Nursing Part 2
Prerequisite	VET 110 Veterinary Anatomy and Physiology

Prerequisite VET 115 Veterinary Clinical Pathology I Or VET 116 Laboratory and Diagnostic Skills and VET 117 Veterinary Clinical Pathology I Part 2

VET 121 Veterinary Assisting I

Course Information

Description This course is the first of a two course series and will explore veterinary anatomy, common diseases of small animals, zoonoses, and nutrition. The learner will get hands on experience in animal handling and restraint and basic grooming techniques for small animals.

Total Credits 1

Pre/Corequisites

Prerequisite VET102 Introduction to Veterinary Assisting/Animal Science

VET 122 Veterinary Nursing Procedures I Part 2

Course Information

Description This course is designed for students who have completed VET 121 Veterinary Assisting I and have been accepted into the Veterinary Nursing program. This course is the first of a two course series and will explore animal nutrition, patient assessment, animal therapeutics, animal husbandry, animal restraint, animal behavior and common dental problems and the prophylactic procedure for teeth cleaning. Learners will get hands-on experience in the collection of various diagnostic samples and preparation for collection.

Total Credits 2

Pre/Corequisites

Prerequisite VET 101 Introduction to Veterinary Nursing or VET 102 Introduction to Veterinary Assisting and VET 103 Introduction to Veterinary Nursing Part 2

Prerequisite VET 110 Veterinary Anatomy and Physiology

Prerequisite	VET 115 Veterinary Clinical Pathology I or VET 116 Laboratory and Diagnostic Skills and VET 117 Veterinary Clinical Pathology I Part 2
Prerequisite	VET 121 Veterinary Assisting I

VET 130 Veterinary Emergency, Critical Medicine and Hospital Procedures

Course Information

Description	This course will cover emergency and critical care nursing skills and hospital procedures in Veterinary Medicine. Topics will focus on companion animal care, but will include large animal, laboratory animal, and exotic animal care as it relates to the veterinary nurse.
Total Credits	2

Pre/Corequisites

Prerequisite	VET 101 Introduction to Veterinary Nursing OR VET 102 Introduction to Veterinary Assisting/Animal Science and VET 103 Introduction to Veterinary Nursing Part 2
Prerequisite	VET 110 Veterinary Anatomy and Physiology
Prerequisite	VET 115 Veterinary Clinical Pathology OR VET 116 Laboratory and Diagnostic Skills and VET 117 Veterinary Clinical Pathology I Part 2

VET 140 Veterinary Pharmacology

Course Information

Description	This course will explore pharmacological principles, including pharmacokinetics drug classes, indications, dosage, preparation, mechanisms of action, and side effects of drugs used in veterinary medicine.
Total Credits	2

Pre/Corequisites

Corequisite	VET 101 Introduction to Veterinary Nursing Or VET 102 Introduction to Veterinary Assisting/Animal Science and VET 103 Introduction to Veterinary Nursing Part 2
Corequisite	VET 110 Veterinary Anatomy and Physiology
Corequisite	VET 115 Veterinary Clinical Pathology Or VET 116 Laboratory and Diagnostic Skills and VET 117 Veterinary Clinical Pathology I Part 2
Prerequisite	ENG 101 Composition I
Prerequisite	CHM 110 General Chemistry
Prerequisite	MTH 101 Intermediate Algebra

VET 141 Veterinary Assisting II

Course Information

Description This course is the second in a two course series and will continue to explore and cover exam room procedures, pharmacology, euthanasia and surgical assisting. The learner will gain hands on experience in animal handling and restraint as well as basic medication administration.

Total Credits 1

Pre/Corequisites

Prerequisite VET 121 Veterinary Assisting I

VET 142 Veterinary Pharmacology Part 2

Course Information

Description This course is designed for students who have completed VET 141 Veterinary Assisting II and have been accepted into the Veterinary Nursing program. This course will explore pharmacological principles, including pharmacokinetics, drug classes, indications, dosages, preparation, mechanisms of action, and side effect of drugs used in veterinary medicine.

Total Credits 1

Pre/Corequisites

Prerequisite	ENG 101 Composition I
Prerequisite	CHM 110 General Chemistry
Prerequisite	MTH 101 Intermediate Algebra
Corequisite	VET 101 Introduction to Veterinary Nursing or VET 102 Introduction to Veterinary Assisting/Animal Science and VET 103 Introduction to Veterinary Nursing Part 2
Corequisite	VET 110 Veterinary Anatomy and Physiology
Corequisite	VET 115 Veterinary Clinical Pathology or VET 116 Laboratory and Diagnostic Skills and VET 117 Veterinary Clinical Pathology Part 2

VET 215 Veterinary Clinical Pathology II

Course Information

Description	This course is the second of a three course series and will continue to build upon pathological processes and prepare the learner for the next course in the sequence. This course will explore the life cycles, modes of transmissions, and pathological consequences associated with common parasites of animals. Laboratory techniques of hematology, serum chemistry, urinalysis and fecal sample collection will be covered. This course also explores special commercial laboratory test procedures and pathological processes. Lab will introduce diagnostic procedures and cover identification of parasites and various pathologies using prepared slides and collected specimens. Additionally, postmortem examination procedures and proper submission of tissue samples for pathologic diagnosis are introduced.
--------------------	--

Total Credits 3

Pre/Corequisites

Prerequisite	VET 101 Introduction to Veterinary Nursing OR VET 102 Introduction to Veterinary Assisting/Animal Science and VET 103 Introduction to Veterinary Nursing Part 2
Prerequisite	VET 110 Veterinary Anatomy and Physiology

Prerequisite VET 115 Veterinary Clinical Pathology OR VET 116 Laboratory and Diagnostic Skills and VET 117 Veterinary Clinical Pathology I Part 2

VET 220 Veterinary Nursing Procedures II

Course Information

Description This course is the second of a two course series and will continue to explore and cover advanced techniques in animal nutrition, patient assessment, animal therapeutics, animal husbandry, animal restraint, animal behavior and common dental problems and dental prophylaxis focused on companion animals. Learners will get hands on experience in the collection of various diagnostic samples and preparation for collection with a focus on companion animals.

Total Credits 2

Pre/Corequisites

Prerequisite VET 120 Veterinary Nursing Procedures I OR VET 121 Veterinary Assisting I and VET 122 Veterinary Nursing Procedures Part 2

Prerequisite VET 215 Veterinary Clinical Pathology II

VET 230 Veterinary Diagnostic Imaging with Lab

Course Information

Description Covers the physics of x-ray photon production, radiation safety, quality control measures, federal and state radiation regulations, film processing, radiographic technique evaluation, positioning of animals, and proper identification and storage of radiographic images. Covers the operation and use of fixed, portable, and dental x-ray machines; the care and development of films; radiographic positioning of animals; and evaluation of radiographic technique. Explores additional diagnostic imaging modalities, such as ultrasound, MRI, CT, and endoscopy.

Total Credits 3

Pre/Corequisites

Prerequisite	VET 101 Introduction to Veterinary Nursing or VET 102 Introduction to Veterinary Assisting/Animal Science and VET 103 Introduction to Veterinary Nursing Part 2
Prerequisite	VET 110 Veterinary Anatomy and Physiology
Prerequisite	VET 115 Veterinary Clinical Pathology OR VET 116 Laboratory and Diagnostic Skills and VET 117 Veterinary Clinical Pathology I Part 2

VET 240 Veterinary Anesthesia and Surgical Assisting

Course Information

Description	This course will explore the principles and practices of veterinary anesthesia and surgical assistance including pre-operative, operative, and post-operative protocols for routine surgical procedures. Learners will be provided with hands-on experience in anesthesiology, surgical patient preparation and surgical assistance.
--------------------	--

Total Credits 3

Pre/Corequisites

Prerequisite	VET 250 Veterinary Nursing: Large Animal Disease and Medical Care
Prerequisite	VET 265 Veterinary Nursing Procedures: Avian, Exotic and Lab Animals Disease and Medical Care

VET 250 Veterinary Nursing: Large Animal Disease and Medical Care

Course Information

Description	This course will explore common large animal breeds (ruminant, equine, swine, and chickens). It will introduce techniques necessary for the provision of nursing care to large animals, including restraint, husbandry, behavior, physical examination, medication administration, diagnostic sample collection, grooming, bandaging, nutrition, and vaccination. It will
--------------------	---

also cover preventive medicine and diseases of large animals including the public health significance of relevant large animal diseases and examine the role of the veterinary nurse in performing diagnostics, nursing care, and client education.

Total Credits 2

Pre/Corequisites

Corequisite	VET 120 Veterinary Nursing Procedures I OR VET 121 Veterinary Assisting I and VET 122 Veterinary Nursing Procedures Part 2
Corequisite	VET 215 Veterinary Clinical Pathology II
Prerequisite	VET 101 Introduction to Veterinary Nursing OR VET 102 Introduction to Veterinary Assisting/Animal Science and VET 103 Introduction to Veterinary Nursing Part 2
Prerequisite	VET 110 Veterinary Anatomy and Physiology
Prerequisite	VET 115 Veterinary Clinical Pathology I OR VET 116 Laboratory and Diagnostic Skills and VET 117 Veterinary Clinical Pathology I Part 2

VET 260 Veterinary Clinical Pathology III

Course Information

Description	This course is the third of a three course series and will bring together knowledge of pathological processes gained from the first two courses in the sequence and relate them to every day practice in veterinary medicine with an emphasis on companion animal practice. This course will continue to explore the life cycles, modes of transmissions, and pathological consequences associated with common parasites of animals. It will also continue discussion of microbiology and cytology as they relate to the veterinary technician. It will explore physical injuries, resulting pathologies and treatments. Additionally, this course will explore environmental and nutritional concepts as they relate to various pathologies with an emphasis in this relation to small/companion animals. Lastly, this course will reinforce the issue of zoonosis and safety on the job with The Occupational Safety and Health Administration (OSHA) protocols.
--------------------	--

Total Credits 3

Pre/Corequisites

Prerequisite	VET 120 Veterinary Nursing Procedures I OR VET 121 Veterinary Assisting I and VET 122 Veterinary Nursing Procedures Part 2
Prerequisite	VET 215 Veterinary Clinical Pathology II

VET 265 Veterinary Nursing Procedures: Avian, Exotic and Lab Animals Disease and Medical Care

Course Information

Description	Introduces basic techniques necessary for the provision of nursing care to small animals, including small animal restraint, husbandry, behavior, physical examination, medication administration, vaccination, and grooming. Includes kennel duty experience in the care of a variety of companion animals. Provides an overview of the anatomy and physiology, the care and handling, and diseases of common laboratory and exotic small animals. Covers the principles of lab animal use in research with an emphasis on animal welfare. This course also covers preventive medicine and diseases of small animals including the public health significance of relevant small animal diseases. Examines the role of the veterinary nurse in performing diagnostics, nursing care, and client education. Reinforce staff/owner relationships with role playing scenarios.
Total Credits	2

Pre/Corequisites

Corequisite	VET 120 Veterinary Nursing Procedures I OR VET 121 Veterinary Assisting I and VET 122 Veterinary Nursing Procedures Part 2
Corequisite	VET 215 Veterinary Clinical Pathology II
Prerequisite	VET 101 Introduction to Veterinary Nursing or VET 102 Introduction to Veterinary Assisting/Animal Science and VET 103 Introduction to Veterinary Nursing Part 2
Prerequisite	VET 110 Veterinary Anatomy and Physiology
Prerequisite	VET 115 Veterinary Clinical Pathology I OR VET 116 Laboratory and Diagnostic Skills and VET 117 Veterinary Clinical Pathology I Part 2

VET 270 Veterinary Nursing Seminar

Course Information

Description This course will serve to reinforce knowledge and concepts covered in the other courses in the program. This course will prepare students for the Veterinary Technician National Exam (VTNE) and help them to become ready to work in the field of Veterinary Nursing.

Total Credits 1

Pre/Corequisites

Prerequisite VET 120 Veterinary Nursing Procedures I or VET 121 Veterinary Assisting I and VET 122 Veterinary Nursing Procedures Part 2

Prerequisite VET 215 Veterinary Clinical Pathology II

VET 275 Veterinary Clinical Practicum

Course Information

Description This course provides hands-on experience working with actual animal cases in a clinical veterinary setting. This course will expand student knowledge and build proficiency of acquired skills through task-specific exercises learned prior in the curriculum. It also links prior on-campus coursework with off-campus learning experiences providing development of increased proficiency and honing of essential skills learned in the formal instructional setting which are necessary for a career as a veterinary technician. Students will be matched to practicum sites at the discretion of the instructor. Each student is expected to attend a minimum of 240 hours at extern sites. These hours can be completed in three 80 hour rotations or one 240 hour rotation with instructor and Dean approval. The practicum will be monitored and reviewed by the program director or the director's appointee.

Total Credits 6

Pre/Corequisites

Prerequisite VET 120 Veterinary Nursing Procedures I or VET 121 Veterinary Assisting I and VET 122 Veterinary Nursing Procedures Part 2

Prerequisite VET 215 Veterinary Clinical Pathology II