New Program Request Form

CA1

General Information

Institution Submitting Proposal	Wichita Area Technical College
Name and Title of Contact Person	Sheree Utash Senior Vice President, Academic Affairs
Title of Proposed Program	Applied Science of Aviation Interiors
Proposed Suggested CIP Code	48.0799
Degree/Certificate Program Description	This program is designed to meet the demands of the aviation and refurbishment industry. The courses are designed to mirror the industry from build-up shop areas to actual aircraft for installation of the interior equipment and furnishings. All courses have been developed in accordance with current industry standards. The program prepares students with the skills and knowledge for production and installation of aviation interiors occupations. Upon completion of the program, students will have the experience to apply for entry-level jobs in the aviation industry.
Number of Credits for the degree and/or certificate	Associate of Applied Science 60 Technical Certificate 42
Academic Unit	Aviation
Proposed Date of Initiation	7/1/2010
Specialty Accrediting Agency	None at this time
Location(s) of Program	National Center for Aviation Training 4004 N Webb Rd Wichita, KS 67226
Summary of Demand for the Program (including source of data)	Three potential student groups were surveyed and asked to identify future and current WATC programs of interest. One survey was distributed to students at various high schools within the greater-Wichita area. Another survey was sent to high school or GED graduates in the south

	central Kansas region. The third survey is available to any prospective student who requests program information through the WATC web site. 1,682 surveys were completed. 172 prospective students indicated an interest in a proposed Aviation Interior Installation program.
Listing of other similar programs in state/region (including enrollments and capacity)	None at this time
Date Institution entered into Program Inventory	3/1/2010

Signature of College Official Shawn Stark Date 2/26/10

Signature of KBOR Official _____ Date

Proposed
Associate of Applied Science Degree
& Technical Certificate for the
Applied Science of Aviation Interiors Program

CIP Code: 48.0799

Wichita Area Technical College
2010

Program Description and Information

Provide a complete catalog description for the proposed program:
See **Appendix A**

List and describe the admission requirements and the graduation requirements for the proposed program:
Admission Requirements:
The requirements for admission to the Applied Science of Aviation Interiors program are:

- Attainment of 16 or more years of age
- Documentation of high school graduation or satisfaction of High School equivalency certificate requirements;
- Achievement of minimum regular admission scores on tests of reading, language, and math as specified in WATC's document Minimum Program Entrance scores; and
- Completion of application and related procedures

Transfer Students

- Admission of transfer students to the Applied Science of Aviation Interiors program contingent upon their meeting the following requirements:
- Regular admission and good standing at a regionally accredited technical certificate or degree granting institution and proper completion of applications and related procedures.

Program Requirements
Associate of Applied Science

- A minimum of 60 semester credits with an overall GPA of 2.0 or higher.
- A passing grade in all courses within the student's declared program of study.

- At least 25 percent of credits must be earned at WATC.
- Recommendation for graduation by the registrar.

Technical Certificate

- A minimum of 42 semester credits with an overall GPA of 2.0 or higher.
- A passing grade in all courses within the student's declared program of study.
- At least 25 percent of credits must be earned at WATC.
- Recommendation for graduation by the registrar.

Graduation Requirements

To be awarded an AAS degree or Technical Certificate, students must pass all required coursework, submit required transcripts for transfer credit and meet all academic, financial or other obligations required for their program of study. To be eligible for graduation, students must have an overall GPA of at least 2.0. WATC urges students to continuously monitor their educational progress. Prior to the final semester or registration period, students must meet with a career planner to ensure that all requirements will be finished prior to the anticipated graduation date.

List and describe the specific objectives for the proposed program:

1. Student will demonstrate academic, technical, and professional knowledge and skills required for job acquisition in the Aviation Interior Installation program.

2. Student will demonstrate various skills and techniques of aviation interiors which meet industry standards.

Describe how the proposed program relates to the institutional mission:

College Mission: The mission of Wichita Area technical College is to provide relevant technical education and training that meets the needs of learners, the community, and industry while instilling a positive work ethic and desire for lifelong learning.

Program Mission: The mission of the Applied Science of Aviation Interiors Program at Wichita Area Technical College, an institution of higher education, is to provide high quality formal training in aviation interiors and support the needs of aviation and other industries locally, regionally, and nationally.

Demand for the Program

Describe the student demand for the program and how the level of interest was determined:

Three potential student groups were surveyed and asked to identify future and current WATC programs of interest. One survey was distributed to students at various high schools within the greater-Wichita area. Another survey was sent to high school or GED graduates in the south central Kansas region. The third survey is available to any prospective student who requests program information through the WATC web site. 1,682 surveys were completed. As seen in Table 1, 172 prospective students indicated an interest in a proposed Aviation Interior Installation program.

Table 1 Student Interest in Aviation Interior Installation	
	Number of Responses
High School Survey	35
GED Survey	1
Prospective Student Survey	136
TOTAL	**172**

Identify employer demand/labor market need, employment trends and projections (existing and anticipated openings), and estimated starting wages. Provide sources of data:

In addition to surveying potential students, a survey was sent in both electronic and paper form to the Human Resource offices of aircraft manufacturers in Wichita. This group was composed of five large aircraft manufacturers (Spirit Aerosystems, The Boeing Company, Cessna Aircraft, Bombardier-LearJet, and Hawker Beechcraft), as well as two smaller companies (Nordam and Precision Pattern Inc.) that specialize in aviation interiors. The survey was created to assess both current and projected future employment and salary opportunities for completers of potential aerospace programs. Six of the seven companies responded for an 86% response rate. Table 2 shows that four of the companies perform aviation interior installation functions within their facilities. All four indicated they would be willing to hire a graduate of WATC's Aviation Interior Installation program. Of these, two also indicated they would be interested in sending their own employees to WATC for aviation interior installation training. Table 2 also shows that potential employers identified approximately 70 job openings during the next two years.

The following chart summarizes the demand/labor market needs, projections, and estimated starting wages for this program.

Table 2

Employer Responses to Needs Assessment of Aviation Interior Installation

	Perform Interior Installation	Hire WATC Graduate	Have WATC Train for Company	Number of Openings
Company#1	Y	Y	Y	35
Company#2	Y	Y	Y	20
Company#3	Y	Y	--	15
Company#4	Y	Y	--	--
Company#5	N	NA	NA	NA
Company#6	N	NA	NA	NA
TOTAL				**70**

Demand from the local community:
See **Appendix B** for letters of support.

Describe any business/industry partnerships specific to the proposed program:
Members of the Aerospace Coatings & Paint Technology curriculum committee which includes business and industry members were highly engaged in developing the curriculum for this program. The group reviewed competencies and suggested potential classroom activities.

Duplication of Existing Programs

Identify other similar programs in the state based on CIP code, title and content. For each of the similar programs provide the following: Name of the institution, name of the program, number of students enrolled, number of slots available.
There are no similar programs in the state.

Provide evidence that, if other similar programs exist, collaboration was pursued.
N/A

Provide extensive evidence and rationale for why collaboration was not a viable option and why there is a need for a duplicative program.
N/A

Program Information

Identify by prefix, number, title, and description (including prerequisites) courses to be required or elective in the proposed program.
See **Appendix C and Appendix D** (course descriptions)

If the proposed program includes multiple curricula (tracks, concentrations, emphases, options, specializations), identify courses unique to each alternative.
Applied Science of Aviation Interiors – Associate of Applied Science (AAS)
Applied Science of Aviation Interiors – Technical Certificate (TC)

See **Appendix C**

Provide a Program of Study/Degree Plan outline for the proposed program including semester-by-semester outline that delineates required and elective courses.
See **Appendix C**

Provide a copy of the competency profile or a comprehensive list of competencies developed for the proposed program.
See **Appendix D**

Indicate any internship and/or opportunities for students to apply the knowledge and skills attained.
Students will have the opportunity to take a technical co-operative project for aviation interior installation.

Identify the career cluster and pathway to which the proposed program belongs.
The career cluster, according to the Kansas Career Fields and Clusters Model, is the Industrial, Manufacturing, and Engineering Systems cluster including aviation.

Describe the proposed program's curriculum integration/articulation plan (tech prep, 2+2, etc.)
None at this time.

List any specialized accreditation required and/or available for the proposed program and describe the institution's plan to achieve that accreditation.
N/A

Identify any existing industry-recognized credentials related to this program.
N/A

Provide all syllabi for the proposed program.
See **Appendix D** for copies of the program course standards. See **General Education** section for general education course standards.

Faculty

Describe faculty qualifications and/or certifications required to teach in the proposed program.
A minimum of an Associate's degree but prefer a Bachelor's degree in Aviation Technology or a closely related field or five years full time, in-field work experience within the past seven years is required.

All general education instructors have a Bachelor's degree or higher in their teaching fields, with at least 18 semester hours in the teaching discipline from an accredited college or university. Master's degree preferred.

Describe and list current faculty and their credentials who will be faculty for the proposed program.
Faculty to teach aviation interiors will be determined upon implementation of program.

The General Education courses will be taught by current faculty members from a variety of disciplines. These individuals' qualifications meet or exceed the requirements of the KBOR core competencies project. All general education instructors have either a Master's degree or higher in their teaching fields, or a Master's degree with at least 18 semester graduate hours in the teaching discipline from an accredited college or university.

Identify the number and credentials of new faculty to be hired.

One new technical faculty member will be hired for the initial start up phase of this program. The instructor credentials will meet or exceed the requirement for this program. Adjunct faculty will be employed as needed based on student enrollment.
Indicate the proposed full-time to part-time faculty ration; student to faculty ration; and number of adjunct faculty required for program start up and sustainability.

The proposed fulltime to part-time ratio is estimated at 1:1 with projected addition of adjuncts changing that ration (with additional student enrollments) at 3:1.

The student to faculty ratio will be maintained from 10:1 to 20:1

The student to general education faculty ratio will be maintained at 20:1

Cost and Funding for Proposed Program

Provide evidence of adequate resources including projected staff requirements, advising services, physical facilities, instructional equipment, instructional materials, library requirements, contractual services or clinical placements to support and sustain the proposed program.

Staff requirements:
No new staff are needed at this time.

Advising services:
Advising prospective students will be shared between the faculty of the Applied Science of Aviation Interiors program and the college's Learner Services staff. As with other programs offered by the college, Learner Services provides general information, assists students with admission to the college, and transfer of credits. Program personnel provide detailed information about the Applied Science of Aviation Interiors program. Financial aid advising is provided by the Financial Aid Specialist.

Additional services:
WATC provides a variety of services to students designed to ensure they are successful in their educational pursuits. Academic Success provides interventions designed to assist students who are struggling academically. Those student who need to brush up on skills in order to fulfill program entrance requirements and students who need assistance with their college course work in the areas of math, science and English have access to labs with trained staff and tutors. Career Services provides students with assistance in defining career goals, exploring personal interests, career and general counseling. The Learner Success Administrator coordinates services for students with disabilities. In addition, the college provides training to faculty through FacultyImpact to assist them in identifying students in distress so the students can be referred to the appropriate services within the college and community.

Physical facilities:
The Applied Science of Aviation Interiors program will be located at the National Center for Aviation Training, 4004 N. Webb Road, Col. James A. Jabara Airport, Wichita, KS, 67226.

Instructional equipment:
Existing physical facilities are sufficient to incubate the Applied Science of Aviation Interiors program. By offering many of the courses in the evening and on weekends the college will be better utilizing existing resources. This program will be taught at the National Center for Aviation Training (NCAT) Campus, 4004 North Webb Road once construction is completed.

Instructional materials:
No new instructional materials are needed at this time.

Library requirements:
Databases available at WATC locations include: EBSCOhost and ProQuest. Students can also access a number of databases by signing up for the Kansas Library Card. There is no charge for this card.

Contractual services:
None

Clinical placements:
There are no clinical requirements for this program

Provide detail on CA1a- form.
See **Appendix E**

Describe any grants or outside funding sources that will be used for the initial start up of the new program and to sustain the proposed program.
Equipment needed for startup is already available. Upon approval, grant funding will be pursued in order to sustain the program in the future. **See Appendix F**

Program Review and Assessment

Describe the process and frequency for review of the program content including competencies.
The Applied Science of Aviation Interiors program will go through the same program review and assessment processes that are used for all other programs throughout the college. The program objectives and competencies are formulated into a program assessment matrix that is completed by the faculty. Data from the matrix is complied and utilized by the programs to identify their strengths and challenges. They are also used to verify student learning and plan for future instructional improvements. Faculty will then make curricular revisions as indicated by data; this would include changes to outcomes, competencies, content, instruction, resources, and other curricular activities. Supplemental data is also collected through student course and program evaluations, student satisfaction surveys, student and employer assessment surveys, and graduate placement statistics.

A program industry advocate team will annually review program content, admission requirements, equipment, program outcomes, objectives, and competencies, and receive information regarding program performance yearly. Information from these meetings will guide faculty regarding industry needs and provide assurance that the knowledge and skills they are teaching is what is needed by industry. In addition, any state aligned curriculum approved by KBOR will be implemented.

Each program conducts a formal review to ensure that its objectives and competencies are being achieved, and that there is a level of accountability in place. The program review takes into account all of the information produced about the program and brings it together in one evaluation. The program review allows programs and departments to identify their strengths, pinpoint areas for improvement, and discuss other resources that impact their area. The structure of program review is very much like a program self study. Faculty will complete their program review and submit it to the Senior Vice President, Academic Affairs. Each program review is made up of six major components: program information, curriculum, advisory committee, resources, program outcomes, and summary. For each area, faculty are required to describe or provide feedback on specific aspects, providing data and/or support documentation when available. After reviewing the completed program review, the senior vice president meets with the program faculty. Each program then defines a course of action that they would like to take to improve the program based on recommendations within the program review and from the senior vice president and the rest of the faculty.

Describe the process and frequency for review of the level of program success and process for remediation of areas of concern.

Students are regularly evaluated throughout the Applied Science of Aviation Interiors program for mastery of knowledge and technical skills. Assessment tools include written exams, demonstrations, projects, and other evaluation techniques. They will also be contacted to complete the WATC Follow-up Study that rates various aspects of the program.

Each program conducts a formal review to ensure that its objectives and competencies are being achieved, and that there is a level of accountability in place. The program review takes into account all of the information produced about the program and brings it together in one evaluation. The program review allows programs and departments to identify their strengths, pinpoint areas for improvement, and discuss other resources that impact their area. The structure of program review is very much like a program self study. Faculty complete their program review and submit it to the Senior Vice President, Academic Affairs. Each program review is made up of six major components: program information, curriculum, advisory committee, resources, program outcomes, and summary. For each area, faculty are required to describe or provide feedback on specific aspects, providing data and/or support documentation when available. After reviewing the completed program review, the senior vice president meets with the program faculty. Each program then defines a course of action that they are going to follow order to improve the program based on recommendations within the program review and from the senior vice president and the rest of the faculty. These changes serve as the process for remediation of areas of concern identified via the program review process. The division Senior Learning Officer works with the department faculty to make sure they are implementing the course of action identified during program review. The process is repeated annually to determine if changes were made in program success.

Program Approval at the Institutional Level

Summarize the institutional process undertaken for approval of the proposed program.

The Applied Science of Aviation Interiors program was initially proposed to WATC leadership in 2008.

The steps taken to get a program approved at WATC are summarized below:

Step #1 – Subject Matter Experts (SME) Approval
Step #2 – Leadership Approval
Step #3 – Program Advisory Committee Approval
Step #4 – Educational Affairs Committee Approval
Step #5 – Board of Trustees Curriculum Committee Approval
Step #6 – Board of Trustees Approval
Step #7 – KBOR Full documentation submitted
Step #8 – KBOR Approval
Step #9 – Program Implementation

Provide copies of the Program Advisory Board Minutes (including a list of the members and business connection to the program), Curriculum Committee Minutes, Governing Board Minutes for the meeting at which the new program was approved.

See **Appendix G**

Appendices

Appendix A: Catalog Description

Appendix B: Letters of Support

Appendix C: Program Information

Appendix D: Course Syllabi/Course Standards

Appendix E: CA1-a Form

Appendix F: Carl Perkins Form

Appendix G: Program Advisory Board Minutes, Educational Affairs Minutes, Board of Trustees Minutes

Appendix A

Applied Science of Aviation Interiors

Program Description: Associate of Applied Science

This program is designed to meet the demands of the aviation and refurbishment industry. The courses are designed to mirror the industry from build-up shop areas to actual aircraft for installation of the interior equipment and furnishings. All courses have been developed in accordance with current industry standards.

The program prepares students with the skills and knowledge for production and installation of aviation interiors occupations. Upon completion of the program, students will have the experience to apply for entry-level jobs in the aviation industry.

Program Description: Technical Certificate

This program is designed to meet the demands of the aviation and refurbishment industry. The courses are designed to mirror the industry from build-up shop areas to actual aircraft for installation of the interior equipment and furnishings. All courses have been developed in accordance with current industry standards.

The program prepares students with the skills and knowledge for production and installation of aviation interiors occupations. Upon completion of the program, students will have the experience to apply for entry-level jobs in the aviation industry.

Appendix B

February 04, 2010

To whom it may concern,

With the need for highly skilled manufacturing technicians in the General Aviation industry and for the changes in the processes and procedures within the manufacturing arena, Cessna Aircraft and the Wichita Area Technical College (WATC) have joined together with other local industry subject matter experts by providing technical support and advisory expertise for the development of a Associates of Applied Sciences degree and Technical Certificate program for the *Applied Science of Aviation Interiors*. This program is unique in the Wichita area and will provide increasing opportunities both to the students and the local manufacturers due to its scope for what is required for the fabrication and installation of aviation interiors.

This opportunity to customize the curriculum to our needs, we fully support this program, and have been involved with its development. We intend to give high employment consideration to future graduates of this program due to the higher level of aircraft knowledge that this program provides. This program will provide excellent opportunities and alternatives in highly technical manufacturing positions for individuals not suited for or unable to afford a traditional college education. Furthermore, we acknowledge the opportunity to enroll current technicians in some or all of the classes as needed to supplement our current training programs.

Our involvement with this program will grant a high level of employment consideration for the successful graduate.

Sincerely,

G. Kent Irick
Manager, Technical and SOJT Training
Cessna Aircraft

The Boeing Company
P.O. Box 7730
Wichita, KS 67277-7730

February 11, 2010

Sherry Utash
Vice President, Academic Affairs
Wichita Area Technical College
4004 North Webb Road
Wichita, KS 67226

Dear Ms. Utash:

Recognizing the future need for highly skilled technicians, *The Boeing Company* and the Wichita Area Technical College (WATC) developed an Associate of Applied Science degree and technical certificate programs for *Applied Science of Aviation Interiors.* Local industry experts provided technical support, and WATC facilitated the process ensuring that all educational requirements were met. This program will be unique and successful because no program of this technical magnitude currently exists in the Wichita area.

Given the opportunity to customize the curriculum to our needs, we fully support this program, and we intend to give employment consideration to future graduates. This program will provide excellent opportunities and alternatives in highly technical maintenance positions for individuals. Too often the youth of our community are left behind because the area lacks programs such as this one. Furthermore, we acknowledge the opportunity to enroll current technicians in some or all of the classes as needed to supplement our current training programs.

We endorse this program and intend to give employment consideration to successful graduates.

Sincerely,

Lisa Borlase-Gehrer
BDS Training and Leadership Development

February 23, 2010

Dr. Diane Wright
Vice President, Educational Research and Development
Wichita Area Technical College
4004 North Webb Road
Wichita, KS 67226

Dear Dr. Wright:

I greatly appreciate the opportunity to help with the development of the curriculum for the Associate of Applied Science degree and technical certificate programs for Applied Science of Aviation Interiors. My prior opportunity to work with WATC as Chairman of the Aviation Cabinetry Committee before my retirement as Senior Technical Trainer for the Wichita Division of the NORDAM Group has provided unique insight into the needs of the aviation industry for the quality and timely education of the workforce.

I have had the privilege of visiting with the various leaders in the field of aviation interior installations in the Wichita area to research the requirements of the industry. During that research, we discovered both the technical training requirements and the expansion of future manpower requirements of the industry surrounding the Wichita area. There is and will continue to be a growing need for this training in both new aircraft manufacture as well as the refurbishment of existing aircraft.

The opportunity you have given members of industry to help develop and maintain the curriculum for this program will insure it's long term success.

Best regards,

Larry C. Bay

Appendix C

Applied Science of Aviation Interiors

Associate of Applied Science

Course Prefix	Course Number	Course Title	Credit Hours
Technical Curriculum			
AVC	100	Aerospace Safety	1
AVC	101	Applied Shop Math	2
AVC	102	Precision Instruments	1
AVC	103	Geometric Dimensioning & Tolerancing	1
AVC	104	Quality Control Concepts	1
AVC	105	Aircraft Familiarization	1
AVC	106	Aerospace Blueprint Reading	2
AVC	107	Fundamentals for Aerospace Manufacturing	1
AVC	108	Aircraft Systems & Components	4
CAT	122	Enovia DMU	2
AIN	100	Hand & Power Tools	2
AIN	105	Regulatory Requirements	1
AIN	110	Aircraft Interior Installer I	4
AIN	115	Aircraft Interior Installer II	5
AIN	120	Aircraft Interior Installer III	6
AIN	125	Technical Co-Operative Project for Aviation Interior Installation	4
		OR	
AIN	130	Integrated Assembly Capstone Project	
EMP	100	Global Professional Standards	2
General Education Curriculum			
CED	115	Computer Applications	3
ENG	101	Composition I	3
MTH	112	College Algebra	3
		OR	
MTH	101	Intermediate Algebra	
PHS	110	Physical Science	5
PSY	101	General Psychology	3
		OR	
SOC	101	Principles of Sociology	
SPH	101	Public Speaking	3
		OR	
SPH	111	Interpersonal Communication	
Total Program			
Technical Curriculum			40
General Education Curriculum			20
Total			**60**

Applied Science of Aviation Interiors
Technical Certificate

Course Prefix	Course Number	Course Title	Credit Hours
Technical Curriculum			
AVC	100	Aerospace Safety	1
AVC	101	Applied Shop Math	2
AVC	102	Precision Instruments	1
AVC	103	Geometric Dimensioning & Tolerancing	1
AVC	104	Quality Control Concepts	1
AVC	105	Aircraft Familiarization	1
AVC	106	Aerospace Blueprint Reading	2
AVC	107	Fundamentals for Aerospace Manufacturing	1
AVC	108	Aircraft Systems & Components	4
CAT	122	Enovia DMU	2
AIN	100	Hand & Power Tools	2
AIN	105	Regulatory Requirements	1
AIN	110	Aircraft Interior Installer I	4
AIN	115	Aircraft Interior Installer II	5
AIN	120	Aircraft Interior Installer III	6
AIN	125	Technical Co-Operative Project for Aviation Interior Installation	4
		OR	
AIN	130	Integrated Assembly Capstone Project	
EMP	100	Global Professional Standards	2
General Education Curriculum			
CED	101	Computer Essentials	2
Total Program			
Technical Curriculum			40
General Education Curriculum			2
Total			**42**

Appendix D

WICHITA AREA TECHNICAL COLLEGE

Course Standard

AVC100 Aerospace Safety

Course Description
This course provides an in-depth study of the human and safety practices required for work in aviation and manufacturing fields. Topics include: introduction to OSHA regulations; safety tools, equipment, and procedures; hazardous waste, and first aid and cardiopulmonary resuscitation.

Hours

Lecture	15
Lab	0
Credit	1

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to apply OSHA regulations to the lab and work place	
Competencies	
Introduction to OSHA Regulations	
Applicable regulations	Refer to applicable sections of OSHA regulations
Monitoring agencies	Identify monitoring agencies from which safety regulations can be requested
Hazardous Communications	Discuss the Material Safety Data Sheets (MSDS) Right-to-Know Law
	Obtain MSDS information concerning the hazards of the workplace
Fire protection procedures	Identify types of fires, extinguishers, and protective clothing
	Identify the appropriate action for reporting fires and appropriate firefighting procedures
Outcomes: The student will be able to demonstrate the effective use of safety tools, equipment and procedures in the lab	
Competencies	
Safety Tools, Equipment, and Procedures	

Tools, equipment, and protective apparel	Identify and discuss the use of safety tools and equipment
	Discuss appropriate protective apparel for various tasks
Safe use of tools	Demonstrate the safe use of hand and power tools
Ladder and scaffold selection	Select the proper ladder and/or scaffold for equipment inspection, maintenance, troubleshooting, and system component replacement
Ladder and scaffold use	Demonstrate safe use of ladders and scaffolds
Rigging materials	Identify rigging materials and discuss the process of rigging
	Demonstrate the selection and use of rigging materials
Fall Protection	Identify fall protection procedures
	Identify standards for fall protection
	Identify fall protection equipment for individual and facility
	Demonstrate how to fit fall protection equipment
Walking & Working Surfaces	Identify walking and working surface hazards
	Identify industry standards for walking and working surfaces
	Identify corrective measures needed based on facility
Handling materials	Demonstrate material handling techniques
	Discuss safety zones and safety zone identification
Using chemicals safely	Identify types of chemicals used by aviation and/or manufacturing technicians and their particular safety requirements
Environmental requirements	Identify proper ventilation, filtration, lighting, heating, grounding, clothing, and communication requirements for work in confined spaces
	Use proper ventilation, lighting, heating, grounding, clothing, and communication
Clothing	Wear approved flame-resistant clothing
	Change to clean clothing when present clothing becomes soiled
Shoes	Select shoes appropriate to the work site
Hard hat	Wear a hard hat in designated areas
Eye protection	Wear eyeglasses/face shields in designated areas
Gloves	Wear gloves appropriate to the materials being handled
Electrical protection	Identify electrical service protective clothing and equipment
	Identify basic electrical safety standards
	Identify safe practices for working with electricity
	Identify electrical safety hazards
Grounding and tagging	Identify grounding and circuit control box tagging procedures
	Use grounding and circuit control box tagging procedures
Lock-out tag	Identify lock-out tag out
	Identify accepted standards/regulations for lock – out tag out
	Mount a lock-out tag for use with a padlock
Padlock	Mount a padlock on a breaker box/lock-out tag
Fuse puller	Use a fuse puller to remove a fuse
Tools and equipment pouch	Prepare a tools and equipment pouch for on-site maintenance tasks
	Identify secondary sources of safety information related to industry

Vacuum	Describe value of dust removal
Shutdown procedures	Identify operation or shutdown procedures necessary during severe weather, fire, or flood conditions
	Discuss the use of shut-down procedures during severe weather, fire, or flood conditions
Outcomes: The student will be able to demonstrate effective hazardous waste procedures	
Competencies	
Hazardous Waste	
Solvents and liquids	Identify proper storage processes
	Identify waste reduction techniques
	Identify solvents and their alternatives
Solid Waste	Demonstrate proper handling of prepreg solid waste
	Demonstrate proper handling of lab clothing
	Demonstrate proper handling of rags and brushes
Disposal of Hazardous Waste	Identify proper hazardous waste disposal techniques
	Define legal requirements and responsibilities
	Define documentation and tracking requirements and responsibilities
Outcomes: The student will be able to identify first aid procedures	
Competencies	
First Aid and Cardiopulmonary Resuscitation	
CPR practices	Identify proper first aid and/or Cardiopulmonary Resuscitation (CPR) practices
	Develop an emergency/first aid plan for the shop or work site
Shock, fire, burn, and explosion	List methods of preventing shock, burns, fires and explosions
Outcomes: The student will be able to identify blood borne pathogens procedures	
Competencies	
Blood Borne Pathogens	Identify blood borne pathogens
	Identify standards and procedures when working with blood borne pathogens
	Identify Personal Protective Equipment (PPE) used in blood borne pathogens situations
	Identify proper disposal of blood borne pathogens and equipment

Suggested Resources

List books, and other resources used here

WICHITA AREA TECHNICAL COLLEGE

Course Standard

AVC101 Applied Shop Math

Course Description

This course focuses on skills required to complete common shop math problems including reading and interpreting part dimensions, checking part features and recording accurate measurements. The application of mathematical skills to the manufacturing environment is an integral part of the course.

Hours

Lecture	30
Lab	0
Credit	2

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to manipulate whole numbers	
Competencies	
Whole Numbers	Define whole numbers
	Read whole numbers
	Write whole numbers
	Convert whole numbers
	Perform basic functions on whole numbers (add, subtract, multiply and divide)
Outcomes: The student will be able to manipulate fractions	
Competencies	
Fractions	Define fractions
	Read fractions
	Write fractions
	Convert fractions
	Perform basic functions on fractions (add, subtract, multiply and divide)
Outcomes: The student will be able manipulate decimals	
Competencies	
Decimals	Define decimals
	Read decimals
	Write decimals

	Convert decimals
	Perform basic functions on decimals (add, subtract, multiply and divide)
Outcomes: The student will be able to manipulate percentages	
Competencies	
Percentages	Define percentages
	Read percentages
	Write percentages
	Convert percentages
	Perform basic functions on percentages (add, subtract, multiply and divide)
Outcomes: The student will be able to calculate tolerances in industry based scenario	
Competencies	
Tolerance	Define tolerance
	Calculate tolerance

Suggested Resources

List books, and other resources used here

WICHITA AREA TECHNICAL COLLEGE

Course Standard

AVC102 Precision Instruments

Course Description

This course provides students with the knowledge and skills needed to utilize precision measurement tools in the manufacturing and aerospace environment. Students will learn to utilize the different types of tools, interpret the measurement results and apply those results to industry specific scenarios.

Hours

Lecture	15
Lab	0
Credit	1

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to interpret reading or linear tools	
Competencies	
Fundamentals and Linear Tools	Identify measurement instruments including: steel, hook, combination squares, depth gages, inside and outside calipers, direct reading calipers, vernier, dial calipers and electronic calipers
	Interpret reading on measuring instruments including: steel, hook, combination squares, depth gages, inside and outside calipers, direct reading calipers, vernier, dial calipers and electronic calipers
Outcomes: The student will be able to interpret reading from micrometer and dial indicator in industry based scenario	
Competencies	
Micrometers and Dial Indicators	Identify outside micrometers
	Identify inside micrometers
	Identify vernier micrometers
	Identify dial indicators
	Identify dial dept gages
	Interpret vernier micrometers
	Interpret dial indicators
	Interpret dial depth gages

Suggested Resources

List books, and other resources used here

Innovative Technology for Learning Materials - IMT101 Inspection Techniques 1 and coming soon ITL 102 Precision Instruments

12.4.09

WICHITA AREA TECHNICAL COLLEGE

Course Standard

AVC103 Geometric Dimensioning & Tolerancing

Course 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.

Hours

Lecture	15
Lab	0
Credit	1

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to define the basic principles of Geometric Dimensioning & Tolerancing (GD&T)	
Competencies	
Basic Principles	Define Geometric Dimensioning & Tolerancing
	Define ASME Y 14.5M-1994
	Define Geometric Tolerance
	Define Datums and Datum Targets
	Identify Basic Dimensions
	Identify Maximum Material Condition
	Identify Least Material Condition
	Define Types of Fit
Outcomes: The student will be able to identify GD&T symbols	
Competencies	
GD&T Symbols	Identify Format of Feature Control Frame
	Identify Geometric Characteristics
	Identify Tolerance Zone
	Identify Maximum Material Condition Principle
	Identify Least Material Condition Principle
	Identify Regardless of Feature Size Principle
	Identify Datum Reference

Outcomes: The student will be able to interpret form and orientation tolerances	
Competencies	
Form and Orientation Tolerances	Interpret Flatness
	Interpret Straightness
	Interpret Circularity
	Interpret Cylindricity
	Interpret Overview of Orientation Tolerances
	Interpret Perpendicularity
	Interpret Angularity
	Interpret Parallelism
Outcomes: The student will be able to interpret profile, runout and location tolerances	
Competencies	
Profile, Runout and Location Tolerances	Interpret Profile of a Surface
	Interpret Profile of a Line
	Interpret Methods of Specifying Profile Tolerances
	Interpret Overview of Runout Tolerances
	Interpret Circular Runout
	Interpret Total Runout
	Interpret Overview of Location Tolerances
	Interpret Position
	Interpret Concentricity
	Interpret Symmetry

Suggested Resources

List books, and other resources used here

WICHITA AREA TECHNICAL COLLEGE

Course Standard

AVC104 Quality Control Concepts

Course 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.

Hours

Lecture	15
Lab	0
Credit	1

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to discuss the usage of statistical process control in relationship to quality concepts in the aerospace industry	
Competencies	
Statistical Process Control	Discuss the theory of Statistical Process Control (SPC)
	Relate the application of SPC to aerospace manufacturing
	Use different types of data gathering techniques
	Record data on different types of control charts
Outcomes: The student will be able to the history of the quality movement	
Competencies	
History of Quality Improvement	Describe the quality condition of the United States before and after the 1950's
	Discuss the quality condition of the United States from the 1990's to the present
	Describe the quality condition of other industrialized nations
	Discuss the elements of change in both the United States and other nations
Outcomes: The student will be able to describe the teams role in quality improvement	
Competencies	
Team Building for Quality	Define synergy

Improvement	
	Describe the four C's of successful teamwork
	Describe the stages of team growth
Outcomes: The student will be able to describe the impact of lean manufacturing concepts on the aerospace industry	
Competencies	
Lean Manufacturing	Define Lean Manufacturing in the aerospace environment
	Describe the history of lean manufacturing in Aerospace industries
	Identify tools used in lean manufacturing
	Describe the impact of lean on the aerospace industries
	Apply lean manufacturing tools to industry based scenarios

Suggested Resources

List books, and other resources used here

Innovative Technology for learning materials - ITL 104 Quality Control Concepts

WICHITA AREA TECHNICAL COLLEGE

Course Standard

AVC105 Aircraft Familiarization

Course Description
This course is designed to provide an introduction to the world of aviation. Students will be introduced to basic aerospace concepts including the history of flight, principles of flight, the role of regulation in the industry and the major aircraft systems.

Hours

Lecture	15
Lab	0
Credit	1

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to demonstrate through classroom activities the ability to describe a basic overview of aviation history	
Competencies	
	Identify Timeline of flight
	Identify highlights of local Wichita aviation history
Outcomes: The student will be able to identify the basic concepts in the principles of flight	
Competencies	
	Explain how planes fly
	Identify principles of flight including thrust, drag, lift, pitch, roll, and yaw.
	Identify flight control systems
	Identify types of aircraft based upon the configuration of the aircraft
	Identify the difference in structure and wings found in the different types of aircraft
Outcomes: The student will be able to describe primary assembles/structures and their functions	
Competencies	
	Identify the primary assemblies including Fuselage, Stabilizers, Empennage, Wings, and Pylons
	Identify the function of the primary assemblies
	Identify the relationship between the primary assemblies
	Identify structures including aluminum airframes and composite structures
	Identify the hardware components of the aircraft including fasteners (rivets,

	hylocs, bolts, screws)
	Identify the components of composite structure including adhesives and fasteners
	Identify both the obvious and hidden relationship of individual part to the integrity of the aircraft (1 part to the structure)
	Identify the concepts of and the treatment of different metals against corrosion and dissimilar metals electrolysis
Outcomes: The student will be able describe the role of regulation in the aviation industry	
Competencies	
	Identify the role of documentation in the aerospace industry
	Identify the regulatory bodies which impact aviation including FAA, FAR (Federal Aviation Regulations), DOT (Department of Transportation), EASA, ISO9000, MRB (Material Review Board), ITAR, AS9100, CFR, NADCAP
	Identify the role of regulatory bodies in aviation industry
	Identify why aviation is regulated
	Identify the culture and behaviors of regulation
	Identify certification and qualification procedures/processes for operators
	Identify certification and qualification procedures/processes for aircraft
	Identify certification and qualification procedures/processes for tools
	Identify the role of inspection in the aviation industry
	Identify the drivers of inspection in the aviation industry
	Identify common elements in the timing of inspection
	Identify customer relation issues associated with quality, cosmetic and ascetics of the systems and the life cycle of aircraft
Outcomes: The student will be able to describe a basic overview of the role of major systems in flight	
Competencies	
	List the major systems found within an aircraft
	Identify the Electrical systems
	Identify the Avionics system
	Identify the Hydraulics system
	Identify the Pneumatics systems
	Identify Mechanical components
	Identify the relationship between the major systems within an aircraft
	Identify components of each systems, function and relationship to aircraft

Suggested Resources

List books, and other resources used here

Innovative Technology for learning materials - ITL 105 Aircraft Familiarization

WICHITA AREA TECHNICAL COLLEGE

Course Standard

AVC106 Aerospace Blueprint Reading

Course Description

This course builds basic blueprint reading skills leading to a systematic approach to reading an aircraft blueprint. Students will learn a systematic approach to reading aircraft blue prints through actual manipulation of working drawings.

Hours

Lecture	30
Lab	0
Credit	2

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to identify the engineering drawing role in the aerospace industry	
Competencies	
Engineering Drawing	Identify purpose for drawing
	Define types of engineering drawing including production, assembly, detail and installation
Outcomes: The student will be able to locate and interpret basic drawing elements	
Competencies	
Common Elements of Engineering Drawings	
Title Block	Locate title block
	Interpret the information found in title block
Parts List	Locate the parts list
	Interpret the information found in parts list
Revision block	Locate revision block
	Interpret the information found in the revision block
Notes	Locate notes
	Interpret information in notes
Drawing Change	Locate drawing change notice

notice	
	Interpret drawing change notice
Drawing Departure Authorization	Locate departure authorization notice
	Interpret departure authorization notice
Engineering Orders	Locate engineering orders
	Interpret engineering orders
Drawing Scales	Interpret drawing scales
	Apply scale principles to drawings
Outcomes: The student will be able to identify the common types of drawing methods	
Competencies	
Types of Drawing Methods	
Orthographic	Identify 6 sides of orthographic projection
	Identify Third Angle Projection
	Identify First Angle Projection
Schematic	Identify schematic drawing
	Define schematic drawing
Pictorial	Identify pictorial drawing
	Define pictorial drawing
Oblique	Identify oblique drawing
	Define oblique drawing
Isometric	Identify oblique drawing
	Define oblique drawing
Outcomes: The student will be able to identify the principle views on engineering drawings	
Competencies	
Principle Views	Identify Auxiliary View
	Identify Partial View
	Identify Enlarged View
	Identify Sectional Views
Outcomes: The student will be able to identify the common drafting conventions on engineering drawings	
Competencies	
Drafting Conventions	Identify Rotation
	Define Line Precedence
Outcomes: The student will be identify lines and symbols used in aviation	
Competencies	
Lines and Symbols	Identify break lines, cutting plane lines, cross hatching lines, leader lines, hidden lines, visible line, phantom line
	Identify center line

	Identify reference lines including fuselage, water and buttock
	Identify directional arrows
	Identify symbols including fastener codes, directional arrows, flag note, butte line notation, water line notation, fuselage station location
Outcomes: The student will be able explain dimensions and tolerances	
Competencies	
Dimension and Tolerance	Identify types dimension
	Identify tolerance
	Explain purpose of dimension lines, extension lines
	Interpret dimensions of arc, angels and chords
	Identify tolerance methods including limit dimensioning, plus and minus tolerance, bilateral tolerances and unilateral tolerances
	Calculate tolerance
Outcomes: The student will be able to identify documentation procedures in engineering drawings	
Competencies	
Drawing Documentation Procedures	Identify types of document control numbers
	Interpret the information found in document control

Suggested Resources

List books, and other resources used here

ITL course content – IBP101 Blueprint Reading

WICHITA AREA TECHNICAL COLLEGE

Course Standard

AVC107 Fundamentals for Aerospace Manufacturing

Course 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.

Hours

Lecture	15
Lab	0
Credit	1

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to identify the manufacturing cost concepts as they relate to aviation	
Competencies	
	Identify the relationship between cost and materials
	Identify the relationship between cost and tolerance
	Identify the relationship between cost and production volume
	Identify activity based costing
Outcomes: The student will be able to identify manufacturing systems management and control	
Competencies	
	Identify production systems as they are applied to aviation
	Identify just in time manufacturing concepts
	Indentify statistical quality control (SPC)
	Identify manufacturing system control strategies as they are applied to aviation
	Identify the close relationship that exists between the manufacturing environment and the product domain of the industry
Outcomes: The student will be able to identify manufacturing processes and technologies control	
Competencies	
	Identify common manufacturing processes and technologies used in aviation

	manufacturing
	Identify machinery utilized in aviation manufacturing
	Identify systems and processes uses in the manufacturing of specific components and subsystems of aviation manufacturing
	Identify selection processes used to determine appropriate manufacturing processes for each part
Outcomes: The student will be able to identify producabiltiy concepts in aviation manufacturing	
Competencies	
	Identify concurrent systems engineering
	Identify quality function deployment
	Identify design for manufacturability concepts
	Identify CAD/CAM integration in aviation manufacturing

Suggested Resources

List books, and other resources used here

Innovative Technology for learning materials - ITL 107 Fundamentals for Aerospace Manufacturing

WICHITA AREA TECHNICAL COLLEGE

Course Standard

AVC108 Aircraft Systems & Components

Course Description

This course is designed to provide the aviation student with an in-depth knowledge of the major systems and components of the aircraft. Students will begin by learning to read the schematics of the systems and then move on to the operation of each system.

Hours

Lecture	60
Lab	0
Credit	4

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to read schematics	
Competencies	
Schematics	Indentify schematics including electrical, hydraulic, pneumatic
	Indentify symbols used on schematics
	Read the schematics
	Apply schematics to review of aircraft systems
Outcomes: The student will be able to identify the role of the electrical systems in aircraft	
Competencies	
Electrical Systems	Identify the electrical systems
	Identify the components of electrical systems
	Identify how the electrical systems are integrated into the aircraft
	Identify the operation of the electrical systems
	Review safety issues commonly found with electrical systems
	Define Electrostatic Discharge (ESD)
	Describe ESD impact on the aircraft
	Identify ESD product, characteristics, handling and packaging
	Identify the routing concepts on wire systems including bend radius, clamping and chafing
	Identify appropriate handling procedures of this system including appropriate placement of temporary covers or protective devices
	Identify electrical bonding and grounding in both mechanical and composites parts
	Identify the impact of moisture on this system

Outcomes: The student will be able to identify the role of the avionics systems in aircraft	
Competencies	
Avionics Systems	Identify the avionic systems
	Identify the components of avionic systems
	Identify how avionic systems are integrated into the aircraft
	Identify the operation of the avionic systems
	Review safety issues commonly found with avionic systems
	Identify the providers of avionic systems
	Identify the components of the avionics package
	Identify appropriate handling procedures of this system including appropriate use and placement of temporary covers or protective devices
	Identify the documentation procedures associated with this system including installation, removal and repair
	Identify the impact of moisture on this system
Outcomes: The student will be able to identify the role of the hydraulic systems in aircraft	
Competencies	
Hydraulic Systems	Identify the hydraulic systems and the different types used in aircraft
	Identify the components of hydraulic systems
	Identify how hydraulic systems are integrated into the aircraft
	Identify the operation of the hydraulic systems
	Review safety issues commonly found with hydraulic systems
	Identify appropriate handling procedures of this system including appropriate placement of temporary covers or protective devices
	Identify the documentation procedures associated with this system including installation, removal and repair
Outcomes: The student will be able to identify the role of the pneumatic systems in aircraft	
Competencies	
Pneumatic Systems	Identify the pneumatic systems
	Identify the components of pneumatic systems
	Identify how pneumatic systems are integrated into the aircraft
	Identify the operation of the pneumatic systems
	Review safety issues commonly found with pneumatic systems
	Identify appropriate handling procedures of this system including appropriate use and placement of temporary covers or protective devices
	Identify the documentation procedures associated with this system including installation, removal and repair
Outcomes: The student will be able to identify the role of the mechanical components in aircraft	
Competencies	
Mechanical Components	Identify the mechanical components

	Identify the components of mechanical systems
	Identify how mechanical components are integrated into the aircraft
	Identify the operation of the mechanical components
	Review safety issues commonly found with mechanical components
Outcomes: The student will be able to identify the role of the landing gear systems in aircraft	
Competencies	
Landing Gear Systems	Identify the landing systems including steering and brakes
	Identify the components of landing systems
	Identify how landing systems are integrated into the aircraft
	Identify the operation of the landing systems
	Review safety issues commonly found with landing systems
Outcomes: The student will be able to identify the role of the flight control system in aircraft	
Competencies	
Flight Control Systems	Identify different types of flight controls including flaps, ailerons, speed breaks and wing slates
	Identify the different systems within flight controls
	Identify the components of flight systems
	Identify how flight control systems are integrated into the aircraft
	Identify the operation of the flight control system
	Identify rigging of flight controls
	Identify the role of tension, tools and temperature in flight control systems
	Identify the role of friction and forces in flight control systems
	Identify the role of functional test in flight controls
	Identify the documentation procedures associated with this system including installation, removal and repair
	Review safety issues commonly found with flight control systems
Outcomes: The student will be able to identify the role of the environmental control systems in aircraft	
Competencies	
Environmental Control Systems	Identify the environmental systems including heat, air and pressurization
	Identify the components of environmental systems
	Identify how environmental systems are integrated into the aircraft
	Identify the operation of the environmental systems
	Identify the impact of moisture on this system
	Review safety issues commonly found with environmental systems
Outcomes: The student will be able to identify the role of the Anti - Ice and Deice systems systems in aircraft	
Competencies	
Anti-Ice and Deice	Identify the anti – ice and deice systems

Systems	
	Identify the components of anti – ice and deice system
	Identify how anti – ice and deice systems are integrated into the aircraft
	Identify the operation of the anti – ice and deice systems
	Identify the impact of moisture on this system
	Review safety issues commonly found with anti – ice and deice systems
Outcomes: The student will be able to identify the role of the door systems in aircraft	
Competencies	
Door Systems	Identify the door systems
	Identify the components of door systems
	Identify how door systems are integrated into the aircraft
	Identify the operation of the door systems
	Review safety issues commonly found with door systems
Outcomes: The student will be able to identify the role of the windows systems in aircraft	
Competencies	
Windows Systems	Identify the windows systems
	Identify the components of windows systems
	Identify how windows systems are integrated into the aircraft
	Identify the operation of the windows systems
	Review safety issues commonly found with windows systems
Outcomes: The student will be able to identify the role of the fuel systems in aircraft	
Competencies	
Fuel Systems	Identify the fuel systems
	Identify the components of fuel systems
	Identify how fuel systems are integrated into the aircraft
	Identify the operation of the fuel systems
	Identify the impact of moisture on this system
	Review safety issues commonly found with fuel systems
Outcomes: The student will be able to identify the role of the propulsion systems in aircraft	
Competencies	
Propulsion Systems	Identify the propulsion systems including radial, turbine and reciprocating
	Identify the components of propulsion systems
	Identify how propulsion systems are integrated into the aircraft
	Identify the operation of the propulsion systems
	Review safety issues commonly found with propulsion systems

Suggested Resources

List books, and other resources used here

Innovative Technology for learning materials - ITL 108 Aircraft Systems and Components

WICHITA AREA TECHNICAL COLLEGE

Course Standard

CAT 122 CATIA ENOVIA DMU

Course Description

This course is intended for students who want to learn to view and analyze CAD data. Topics covered include the following: the various analytical and navigational tools available within ENOVIA DMU, functional dimensioning and tolerance information, product environment, and the 2D viewer environment.

Hours

Lecture	
Lab	60
Credit	2

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to demonstrate mastery of ENOVIA DMU software	
Competencies	
	Utilize the insert component functions
	Utilize the manipulation of component functions
	Perform measurements within the software
	Utilize the following functions: clash analysis, section analysis, functional dimensioning, tolerance information, and 2D drawings
	Utilize the software to create scenes, annotated views, capture pictures, and create final xml files for external use
	Use all the navigational tools found in ENOVIA DMU

Suggested Resources

List books, and other resources used here

WICHITA AREA TECHNICAL COLLEGE

Course Standard

AIN100 Hand & Power Tools

Course Description
This course introduces students to the various hand and power tools used in the aviation industry specifically related to Aviation Interiors.

Hours

Lecture	15
Lab	30
Credit	2

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to demonstrate mastery of hand and power tools	
Competencies	
	Demonstrate safe and proper use of hand and power tools
	Operate air tools, band saw, drills, sanders, rivet guns, die grinders, sewing machine
	Interpret measuring tools
	Demonstrate care and maintenance of hand and power tools

Suggested Resources

List books, and other resources used here

WICHITA AREA TECHNICAL COLLEGE

Course Standard

AIN105 Regulatory Requirements

Course Description

The course is designed to prepare students for meeting the FAA requirements when working on the interior of an aircraft. The course outlines the procedures, manuals, regulations, and documents used in performing repairs, installations, and alterations on aircraft interiors. Hazardous material regulations and procedures are also addressed.

Hours

Lecture	15
Lab	0
Credit	1

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to utilize Federal Aviation regulations pertinent to aircraft interiors	
Competencies	
	Demonstrate proper usage of aviation manual systems
	Indentify proper procedures as outlined in FAA regulations on how to repair, install and alter aircraft interiors
	Identify ISO 9001 Series
FAR – Chapter 25	Demonstrate ability to read, comprehend, and apply information contained in FAA and manufacturers' aircraft maintenance specifications, data sheets, manuals, publications, and related Federal Aviation Regulations, Airworthiness Directives, and Advisory material
	Read technical data
	Write descriptions of work performed including aircraft discrepancies and corrective actions using typical aircraft maintenance records
	Complete required maintenance forms, records, and inspection reports

Suggested Resources

List books, and other resources used here

WICHITA AREA TECHNICAL COLLEGE

Course Standard

AIN110 Aircraft Interior Installer I

Course Description
This course provides basic construction techniques for sheet metal and composite fixtures used in aircraft interiors. Topics include machining of materials, fastener installation, forming, preservative coatings, layout and marking to facilitate fabrication or assembly.

Hours

Lecture	15
Lab	90
Credit	4

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to demonstrate layout and machining	
Competencies	
	Develop skills in layout to include transfer of plan data, layout tool and technique, determine accuracy, and marking methods
	Develop skills in machining to include cutting, routing, sanding, profiling, and drilling
	Ability to obtain and follow the appropriate checklists for a given aircraft for layout and machining
Outcomes: The student will be able to demonstrate fastener installation and fabrication of aircraft aluminum and composites	
Competencies	
	Develop skills in fastener technologies for the most common interior materials to include riveting
	Develop skills in fabrication of aircraft aluminum and composites to include hand forming of metal, heat forming, vacuum forming, bending, joggling, simple molding
Outcomes: The student will be able to identify coatings used to protect interior fixtures and equipment	
Competencies	
	Identify and demonstrate the proper use of alodine, anodizing, plating, fireproofing, and waterproofing to protect interior fixtures and equipment

Outcomes: The student will be able to install prefabricated and modular assemblies	
Competencies	
	Demonstrate skills in layout of components incorporating, wood, sheetmetal, and composite materials

Suggested Resources

List books, and other resources used here

WICHITA AREA TECHNICAL COLLEGE

Course Standard

AIN115 Aircraft Interior Installer II

Course Description
This course is designed to prepare the airframe for installation including attachment and fitting of insulation, soundproofing, carpeting, as well as wall and window panels. Procedures and techniques for finish and touchup painting are included in this course.

Hours

Lecture	15
Lab	120
Credit	5

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to demonstrate the sequence and flow of the installation process and the need for preplanning tasks prior to final installation	
Competencies	
Aircraft Preparation	Demonstrate orderly work area as outlined by industry standards
	Demonstrate sequence of installation, protection of adjoining areas, correct placement of attachments, and authorization to close
Outcomes: The student will be able to demonstrate ability to install fastening equipment to the aircraft structure per the approved plans	
Competencies	
Attachment to Structure	Install fastening equipment to the aircraft structure per approved plans using mechanical fastening means, adhesive fastening means, sealers, or temporary fastening means
	Install fastening equipment to the aircraft structure per approved plans. Includes panel installation, wall, window, bulkhead, floor, ceiling, headliner
Outcomes: The student will be able to demonstrate the ability install flooring materials in the interior of an aircraft	
Competencies	
	Demonstrate cutting, fitting, joining, attaching, surging, sewing, splicing, and installing floor materials.
	Select and apply fabric and fiberglass covering materials.

	Inspect, test, and repair fabric and fiberglass
Outcomes: The student will be able to demonstrate the ability to install wall, window, and bulkhead materials in an aircraft	
Competencies	
	Demonstrate cutting, fitting, installing wall, window, and bulkhead materials in an aircraft.
Outcomes: The student will be able to demonstrate the ability to install insulation and sound proofing materials in an aircraft	
Competencies	
	Demonstrate the ability to cut, fit, and install insulation and sound proofing materials

Suggested Resources

List books, and other resources used here

WICHITA AREA TECHNICAL COLLEGE

Course Standard

AIN120 Aircraft Interior Installer III

Course Description
This course is designed to prepare students for the final installation of interior fixtures and to prepare the aircraft for final inspection.

Hours

Lecture	15
Lab	150
Credit	6

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to demonstrate the ability to perform the final installation of interior fixtures	
Competencies	
Fixture Installation	Perform installation of cabinet assemblies, seats, benches, tables, and lavatory furnishings
Outcomes: The student will be able to demonstrate an understanding and basic skills in the installation of support equipment	
Competencies	
Support Equipment Installation	Demonstrate basic skills in the installation of the following: lighting, cabin emergency oxygen, heating, ventilation, cooling, electrical power, intercom, sound system, fiber optics, telephone, supply and waste plumbing
Outcomes: The student will be able demonstrate the ability to recognize and solve fit alignment errors as well as perform functional checks on the interior equipment	
Competencies	
Finish Trim and Detail	Exhibit skills in recognizing and solve fitting alignment errors, functional checks, balance and symmetry, and grain and color shade match, silkscreen, and leather touchups
	Apply trim, letters, and touch-up paint
Outcomes: The student will be able to demonstrate the ability to catch details and perform cleanup of interior to allow for the final inspection of the aircraft	
Competencies	
	Exhibit skills in removal of protective covers, removal of debris from

	installation, clean up procedures
	Exhibit skills in upholstery installation techniques, handling, cleaning, and protecting
	Inspect finishes and identify defects
Outcomes:	The student will be able to demonstrate basic composite repair techniques.
Adhesives	Identify types and characteristics of adhesives
	Select appropriate adhesives to match material
	Demonstrate bonding techniques with a variety of industry adhesives
Non Destructive Testing	Define Non Destructive Testing
	Identify NDI testing techniques including tap test, X-Ray, ultra sound, thermograph "exotic methods"
	Demonstrate tap test
Warp and cutting to the template	Demonstrate lay up of the repair
	Demonstrate bagging techniques
	Demonstrate cure techniques in repair

Suggested Resources

List books, and other resources used here

WICHITA AREA TECHNICAL COLLEGE

Course Standard

AIN125 Technical Co-Operative Project for Aviation Interior Installation

Course Description

The course is designed to provide the student with practical hands-on experience working on Aircraft Interior Installations. Students will be required to work on a variety of projects in order to develop diagnostic skills, to reinforce and enhance classroom instruction. Students will work on a part-time basis in a job directly related to applied technologies. This course addresses the full spectrum of Aviation Interior Installers role with the industry. Problem solving strategies within a team concept will be emphasized. Industry and applied research projects will be assigned.

Hours

Lecture	0
Lab	180
Credit	4

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to apply skills learned in the classroom to tasks assigned by the employer	
Competencies	
	Apply skills learned in technical courses to the workplace
	Apply the elements of WATC's Global Professional Standards on the job

Suggested Resources

List books, and other resources used here

WICHITA AREA TECHNICAL COLLEGE

Course Standard

AIN130 Integrated Assembly Capstone Project

Course Description
This course addresses the full spectrum of the Aviation Interiors technician's role within the industry. Problem solving strategies within a team concept will be emphasized. Industry and applied projects will be assigned.

Hours

Lecture	0
Lab	180
Credit	4

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to apply skills and techniques learned in the aviation interiors program to industry-based projects and scenarios	
Competencies	
	Apply various skills and techniques of aviation interiors to industry-based scenarios by completing an industry-based project as assigned by the instructor.
Outcomes: The student will be able to apply the elements of Global Professional Standards training	
Competencies	
	Apply the ten characteristics of Global Professional Standards in the assembly capstone project.

Suggested Resources

List books, and other resources used here

WICHITA AREA TECHNICAL COLLEGE

Course Standard

EMP100 Global Professional Standards

Course Description

This course provides a study of human relations and professional development in today's rapidly changing world that prepares students for living and working in a complex society. Topics include: human relations skills, job acquisition skills, job retention skills, job advancement skills, and professional image skills.

Hours

Lecture	30
Lab	0
Credit	2

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to demonstrate human relation skills for the workplace	
Competencies	
Human Relation Skills	
Goal setting	Develop and set personal goals
Stress management	Diagnose and respond to own stress level
Behavior problems	Identify strategies to handle difficult behaviors effectively
Personal introduction	Make proper introductions
Problem solving/decision making	Identify strategies to solve problems/make decisions
Outcomes: The student will be able to produce employment documents using job acquisition skill techniques	
Competencies	
Job Acquisition Skills	
Job search	Identify strategies to conduct a job search
Career goals	Develop and set career goals
Employment documents	Prepare letter of application
	Prepare resume/application

	Prepare follow-up letters
Interviewing	Demonstrate interviewing techniques
Outcomes: The student will be able to demonstrate job retention techniques for the workplace	
Competencies	
Job Retention Skills	
Office relationships	Identify techniques used to work effectively with co-workers
Time management	Develop time management strategies
Outcomes: The student will be able to demonstrate job advancement skills for the workplace	
Competencies	
Job Advancement Skills	
Performance appraisal	Demonstrate ability to accept counseling positively
	Demonstrate ability to negotiate promotion/salary increase
Supervisory chain	Explain chain of responsibility
Outcomes: The student will be able to explain the impact of a professional image in the workplace	
Competencies	
Professional Image Skills	
Image/Attitude	Project professional image

Suggested Resources

List books, and other resources used here

General Education

WICHITA AREA TECHNICAL COLLEGE

Course Standard

CED115 Computer Applications

Course 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.

Hours

Lecture	45
Lab	0
Credit	3

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will obtain a general knowledge of the Windows operating system by performing a variety of activities in the Windows environment	
Competencies	
Windows	Demonstrate the three key mouse operation skills: clicking, double clicking, and dragging
	Choose commands from a menu
	Open and exit programs within the graphical user interface
	Identify the elements of the My Computer window
	Move, copy, delete and rename files
	Move between applications
	Maximize, minimize, and resize a window
	Create, save, print, and edit a file
Outcomes: The student will develop the ability to perform a variety of basic word processing functions	
Competencies	
Word Processing	Enter text into a document
	Import clip art into a document
	Change the font style, size, and appearance of text
	Spell and grammar check as you type
	Use templates to create documents

	Move text using the cut and paste and the drag and drop method
	Use shortcut menus to accomplish context-sensitive tasks
	Create headers and footers in a document
	Change line spacing, margins, indents
	Create footnotes in a document
Outcomes: The student will perform a variety of tasks to demonstrate their general knowledge of spreadsheets and their functions	
Competencies	
Spreadsheets	Select a range of adjacent or nonadjacent cells
	Apply automatic math functions to create formulas
	Copy formulas in a worksheet
	Change the formatting of numbers and fonts
	Create a chart using default and custom selections
	Change the width of columns and the height of rows in a worksheet
	Create and rename additional sheets
	Preview and print a workbook
	Display and print cell formulas in a worksheet
Outcomes: The student will develop skills in creation and management of databases	
Competencies	
Databases	Define the fields in a table
	Add fields and records to a table
	Print the contents of a table
	Use a form to enter and view data
	Create and run a query
	Use a query to display selected fields
	Join tables in a query
	Restructure a table
	Specify legal values
	Update a table with validation rules
	Specify referential integrity
Outcomes: The student will attain the skills necessary to create a slide show presentation	
Competencies	
Graphic Presentations	Select and apply design templates to a graphics presentation
	Create and edit slides with titles, subtitles, and text
	Change the default font styles, sizes, and appearance of text in slides
	Design, lay out, and create a slide presentation
	Apply the slide, outline, notes, and master views
	Insert clipart into a presentation
	Add a header and footer to slides and outline pages
	Apply custom animations and animation schemes to slides
	Run an animated slide show

Suggested Resources

List books, and other resources used here

WICHITA AREA TECHNICAL COLLEGE

Course Standard

ENG101 Composition I

Course 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 will be introduced to the basic components of research by writing a documented essay in MLA style.

Hours

Lecture	45
Lab	0
Credit	3

Prerequisite/Core requisite:

Satisfactory assessment score and/or minimum of 20 on ACT, or a grade of "C" or above and a passing grade on the post test in EBS110 are required for enrollment.

Course Guide

Outcomes: The student will be able to initiate a writing task	
Competencies	
Focusing and Generating Ideas	Appraise task-related student and professional writing examples
	Generate ideas through a variety of prewriting techniques
	Define and respond to the audience needs appropriate to the writing task
	Focus on a purpose consistent with specific rhetorical situations
	Use writing and reading for inquiry, learning, thinking, and communicating
Outcomes: The student will be able to develop a plan for an essay and write a first draft using that plan as a tool	
Competencies	
Planning and Drafting the Essay	Formulate a thesis statement
	Select information related to the thesis statement
	Organize information according to a logical plan
	Develop multiple drafts
	Understand the relationship among language, knowledge, and power

Outcomes: The student will strengthen essay through revision	
Competencies	
Revising	Critique student's own draft as well as drafts of other students
	Assess effectiveness of draft and validity of student/instructor feedback
	Modify in response to student/instructor comments
	Understand writing as an open process that permits writers to use later invention and rethinking to revise their work
Outcomes: The student will produce a finished essay consistent with standards established by the Humanities Division	
Competencies	
Editing	Construct and correctly punctuate complete sentences
	Assemble grammatically correct structures
	Maintain consistency in person, subject, voice, tense, and mood
	Produce text that is reasonably free of incorrect spelling
Outcomes: The student will learn to support ideas with information from outside sources and acknowledge those sources	
Competencies	
Integrating Sources	Discover relevant information from a variety of sources
	Evaluate credibility of sources
	Paraphrase, summarize, and directly quote sources
	Discern when to paraphrase, summarize, or directly quote according to the writing situation
	Integrate own ideas with those of others
	Employ MLA format including parentheticals and Works Cited

Suggested Resources

List books, and other resources used here

WICHITA AREA TECHNICAL COLLEGE

Course Standard

MTH112 College Algebra

Course 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.

Hours

Lecture	45
Lab	0
Credit	3

Prerequisite/Core requisite:
MTH101 with a minimum grade of "C", or satisfactory course placement assessment or 21 ACT math score

Course Guide

Outcomes: The student will review concepts of real numbers, exponents, radicals, and basic rules of algebra	
Competencies	
Prerequisites: Fundamental Concepts of Algebra	Evaluate algebraic expressions
	Use mathematical models
	Find the intersection of two sets
	Find the union of two sets
	Recognize subsets of the real numbers
	Use inequality symbols
	Evaluate absolute value
	Use absolute value to express distance
	Identify properties of the real numbers
	Simplify algebraic expressions
	Use the product, quotient, zero-exponent, negative exponent, and power rules for exponents
	Use the power of a quotient
	Simplify exponential expressions
	Use scientific notation
	Evaluate square roots

	Simplify radical expressions using the product rule and quotient rule
	Add and subtract square roots
	Rationalize denominators
	Evaluate and perform operations with higher roots
	Understand and use rational exponents
	Add, subtract, and multiply polynomials
	Use FOIL in polynomial multiplication
	Use special products in polynomial multiplication
	Perform operations and with polynomials in several variables
	Factor out the greatest common factor of a polynomial
	Factor by grouping
	Factor trinomials
	Factor the difference of squares
	Factor perfect square trinomials
	Factor the sum and difference of two cubes
	Use a general strategy for factoring polynomials
	Factor algebraic expressions containing fractional and negative components
	Specify numbers that must be excluded from the domain of a rational expression
	Simplify rational expressions
	Multiply and divide rational expressions
	Add and subtract rational expressions
	Simplify complex rational expressions

Outcomes: The student will learn to solve and use linear, quadratic and polynomial equations, equations involving radicals, fractions or absolute values; find intercepts, zeros, and graphical solutions; perform operations with complex numbers and use mathematical models to solve real world application problems

Competencies	
Equations and Inequalities	Plot points in the rectangular coordinate system
	Graph equations in the rectangular coordinate system
	Interpret information about a graphing utility's viewing rectangle or table
	Use a graph to determine intercepts
	Interpret information given by graphs
	Solve linear equations in one variable
	Solve linear equations containing fractions
	Solve rational equations with variables in the denominators
	Recognize identities, conditional equations, and inconsistent equations
	Use linear equations to solve problems
	Solve a formula for a variable
	Add and subtract complex numbers
	Multiply complex numbers
	Divide complex numbers
	Perform operations with square roots of negative numbers
	Solve quadratic equations by factoring, square root property, completing the square, and the quadratic formula
	Use the discriminant to determine the number and type of solutions

	Solve polynomial equations by factoring
	Solve equations involving radicals
	Solve equations with rational exponents
	Solve equations that are quadratic in form
	Solve equations involving absolute value
	Use interval notation
	Find intersections and unions of intervals
	Solve linear inequalities
	Recognize inequalities with no solution or all real numbers as solutions
	Solve compound inequalities
	Solve absolute value inequalities

Outcomes: The student will review previously learned concepts of graphing on the x-y coordinate plane and analyzing linear functions, and make real world applications using these skills

Competencies	
Functions and Graphs	Find the domain and range of a relation
	Determine whether a relation is a function
	Determine whether an equation represents a function
	Evaluate a function
	Graph functions
	Use the vertical line test to identify functions
	Obtain information about a function from its graph
	Identify the domain and range of a function from its graph
	Identify intercepts from a function's graph
	Find and simplify a function's difference quotient
	Understand and use piecewise functions
	Identify intervals on which a function increases, decreases, or is constant
	Use graphs to locate relative maxima or minima
	Identify even or odd functions and recognize their symmetries
	Graph step functions
	Calculate a line's slope
	Write the point-slope form of the equation of a line
	Write and graph the slope-intercept form of the equation of a line
	Graph horizontal or vertical lines
	Recognize and use the general form of a line's equation
	Use intercepts to graph the general form of a line's equation
	Model data with linear functions and make predictions
	Find slopes and equations of parallel and perpendicular lines
	Interpret slope as a rate of change
	Find a function's average rate of change
	Recognize graphs of common functions
	Use vertical shifts to graph functions
	Use horizontal shifts to graph functions
	Use reflections to graph functions
	Use vertical stretching and shrinking to graph functions
	Use horizontal stretching and shrinking to graph functions
	Graph functions involving a sequence of transformations

	Find the domain of a function
	Combine functions using the algebra of functions, specifying domains
	Form composite functions
	Determine domains for composite functions
	Write functions as compositions
	Verify inverse functions
	Find the inverse of a function
	Use the horizontal line test to determine if a function has an inverse function
	Use the graph of a one-to-one function to graph its inverse function
	Find the inverse of a function and graph both functions on the same axes
	Find the distance between two points
	Find the midpoint of a line segment
	Write the standard form of a circle's equation
	Give the center and radius of a circle whose equation is in standard form
	Convert the general form of a circle's equation to standard form
Outcomes: The student will learn to analyze and graph polynomial functions and solve real world application problems involving polynomials	
Competencies	
Polynomial and Rational Functions	Recognize characteristics of parabolas including the vertex
	Graph parabolas
	Determine a quadratic function's minimum or maximum value
	Solve problems involving a quadratic function's minimum or maximum value
	Identify polynomial functions
	Recognize characteristics of graphs of polynomial functions
	Determine end behavior
	Use factoring to find zeros of polynomial functions
	Identify zeros and their multiplicities
	Use the Intermediate Value Theorem
	Understand the relationship between degree and turning points
	Graph polynomial functions
	Use long division to divide polynomials
	Use synthetic division to divide polynomials
	Evaluate a polynomial using the Remainder Theorem
	Use the Factor Theorem to solve a polynomial equation
	Use the rational zero theorem to find possible rational zeros
	Find zeros of a polynomial function, both real and complex answers (includes fundamental theorem of algebra)
	Solve polynomial equations
	Find a polynomial function with given zeros
	Use Descarte's Rule of Signs
	Find the domain of rational functions
	Use arrow notation
	Identify vertical asymptotes
	Identify horizontal asymptotes

	Use transformations to graph rational functions
	Graph rational functions
	Identify slant asymptotes
	Solve applied problems involving rational functions
	Solve polynomial inequalities
	Solve rational inequalities
	Solve problems modeled by polynomial or rational inequalities
	Solve direct variation problems
	Solve inverse variation problems
	Solve combined variation problems
	Solve problems involving joint variation
Outcomes: The student will learn the basic properties and graphs of exponential and logarithmic functions	
Competencies	
Exponential and Logarithmic Functions	Evaluate exponential functions
	Graph exponential functions
	Evaluate functions with base e
	Use compound interest formulas
	Change from logarithmic to exponential form
	Change from exponential to logarithmic form
	Evaluate logarithms
	Use basic logarithmic functions
	Graph logarithmic functions
	Find the domain of a logarithmic function
	Use common logarithms
	Use natural logarithms
	Use the product rule of logarithms
	Use the quotient rule of logarithms
	Use the power rule of logarithms
	Expand logarithmic expressions
	Condense logarithmic expressions
	Use the change-of-base property
	Use like bases to solve exponential equations
	Use logarithms to solve exponential equations
	Use the definition of a logarithm to solve logarithmic equations
	Use the one-on-one property of logarithms to solve logarithmic equations
	Solve applied problems involving exponential and logarithmic equations
	Model exponential growth and decay
	Use logistic growth models
	Model data with exponential and logarithmic functions
	Express an exponential model in base e
Outcomes: The student will solve simple linear systems using algebraic substitution, addition, and elimination methods	

Competencies	
Systems of Equations and Inequalities	Decide whether an ordered pair is a solution of a linear system
	Solve linear systems by substitution
	Solve linear systems by addition
	Identify systems that do not have exactly one ordered-pair solution
	Solve problems using systems of linear equations
	Verify the solution of system of linear equations in three variables
	Solve systems of linear equations in three variables
	Solve problems using systems in three variables
	Decompose P/Q where Q has only distinct linear factors
	Decompose P/Q where Q has repeated linear factors
	Decompose P/Q where Q has a non-repeated prime quadratic factor
	Decompose P/Q where Q has a prime, repeated quadratic factor
	Recognize systems on nonlinear equations in two variables
	Solve nonlinear systems by substitution
	Solve nonlinear systems by addition
	Solve problems using systems of nonlinear equations
	Graph a linear inequality in two variables
	Graph a nonlinear inequality in two variables
	Graph a system on inequalities
	Solve applied problems involving systems of inequalities
	Write an objective function describing a quantity that must be maximized or minimized
	Use inequalities to describe limitations in a situation
	Use linear programming to solve problems
Outcomes: The student will solve simple linear systems using inverse matrices and determinants	
Competencies	
Matrix Solutions to Linear Systems	Write the augmented matrix for a linear system
	Perform matrix row operations
	Use matrices and Gaussian elimination to solve systems
	Use matrices and Gauss-Jordan elimination to solve systems
	Apply Gaussian elimination to systems without unique solutions
	Apply Gaussian elimination to systems with more variables than equations
	Solve problems involving systems without unique solutions
	Use matrix notation
	Understand what is meant by equal matrices
	Add and subtract matrices
	Perform scalar multiplication
	Solve matrix equations
	Multiply matrices
	Describe applied situations with matrix operations
	Find the multiplicative inverse of a square matrix
	Use the inverses to solve matrix equations
	Encode and decode messages

	Evaluate a second-order determinant
	Solve a system of linear equations in two variables using Cramer's rule
	Evaluate a third-order determinant
	Solve a system on linear equations in three variables using Cramer's rule
	Use determinants to identify inconsistent systems and systems with dependent equations
	Evaluate higher-order determinants
Outcomes: The student will recognize, graph and write equations of conics with center at the origin	
Competencies	
Conic Sections	Graph ellipses centered at the origin
	Write equations of ellipses in standard form
	Graph ellipses not centered at the origin
	Solve applied problems involving ellipses
	Locate a hyperbola's vertices and foci
	Write equations of hyperbolas in standard form
	Graph hyperbolas centered at the origin
	Graph hyperbolas not centered at the origin
	Solve applied problems involving hyperbolas
	Graph parabolas with vertices at the origin
	Write equations of parabolas in standard form
	Graph parabolas with vertices not at the origin
	Solve applied problems involving parabolas
Outcomes: The student will utilize notation of sequences, series, and summations; use induction and binomial theorem; solve problems using counting principle and probability	
Competencies	
Sequences, Induction, and Probability	Find particular terms of a sequence from the general term
	Use recursion formulas
	Use factorial notation
	Use summation notation
	Find the common difference for an arithmetic sequence
	Write terms of an arithmetic sequence
	Use the formula for the general term of an arithmetic sequence
	Use the formula for the sum of the first n terms of an arithmetic sequence
	Find the common ratio of a geometric sequence
	Write terms of a geometric sequence
	Use the formula for the general term of a geometric sequence
	Use the formula for the sum of the first n terms of a geometric sequence
	Find the value of an annuity
	Use the formula for the sum of a infinite geometric series
	Understand the principle of mathematical induction
	Prove statements using mathematical induction
	Evaluate a binomial coefficient

	Expand a binomial raiser to a power
	Find a particular term in a binomial expansion
	Use the fundamental counting principle
	Use the permutation formula
	Distinguish between permutation problems and combination problems
	Use the combinations formula
	Compute empirical probability
	Compute theoretical probability
	Find the probability that an event will not occur
	Find the probability of one event or a second event occurring
	Find the probability of one event and a second event occurring

Suggested Resources

List books, and other resources used here

WICHITA AREA
TECHNICAL
COLLEGE

Course Syllabus
Intermediate Algebra
MTH 101 003 - Fall 2009

Credit hours 3
Instructor: Rachel Bates
Office Phone: (316)554-2717
E-Mail: rbates@watc.edu

Office Hours/Hours of Availability:
My office hours are Tuesday, Wednesday, Thursday, Friday (8am – 5pm) and Monday's (1:30pm – 9:30pm). You may call my office at (316)554-2717or e-mail me, and I will gladly schedule an appointment with you.

Virtual Office Hours/Hours of Availability:
I will be available every day (8am – 5pm) to answer emails and general questions. I answer emails regularly and will generally respond immediately. Please, however, allow me at least 24 hours response time to your question/s within the email before declaring me unavailable. Students are encouraged to send emails from the ANGEL course. However if you have general questions about a specific assignment on MyMathLab you can email me from there as well.

Textbook:
Intermediate Algebra: Sullivan, Pearson Education.
Students will be required to purchase a MyMathLab student access kit. This can be purchased at the WATC bookstore or directly from CourseCompass. Students will be required to have direct access to the internet to complete this course. Students are required to purchase a TI-83/84 graphing calculator for this course.

Purpose or Goal of the Class:
To provide a thorough study of the concepts of algebra. The student should be able to simplify many algebraic expressions, solve variable equations, graph straight lines on the rectangular coordinate plane, and make applications of algebra to solving real life problems.

Mission Statement

As an institution of higher learning, the mission of Wichita Area Technical College is to provide relevant, technical education for employment and lifelong learning.

Objectives of this Course:
Students who complete this course with a grade of C or better should have sufficient background to enter an College Algebra course.

Tutoring and Remediation:
If students wish for additional remediation, the instructor does recommend using the resources available to all WATC students. All students will be given a tutoring schedule.

Homework:
15% of your final grade will be based on the assignments you complete during this course. All assignments can be done multiple times. It is possible to obtain 100% on your homework if you are willing to do the work. You will also be expected to keep a notebook/journal. You will be required to turn in your notebook/journal at the end of the course. You grade will be calculated using the following formula:

1. 10% will come from the homework that you complete via online.

2. 5% will come from the homework you submit directly to me. Though there are some portions of the work you will do that have simple, direct answers, the majority of the work will entail a number of steps that must be clearly shown in order to receive credit.

3. To ensure students are working through the necessary steps to solve expressions and equations, you will be required to mail specific homework problems. The homework problems need to include the necessary steps to solve the problem. If the homework is not received, you will receive a zero for that portion of the homework. You are required to keep a homework notebook/journal and hand this in during the final exam. You may drop the assignments off directly at SSEC (in the Academic Success Center).

Quizzes:
15% of your final grade will be based on your quiz scores. Quizzes will be assigned the same week as assignments. The exams are worth 10 points each and consist of (5) questions. You can complete the quizzes as many times as you would like (go for 100%). It is the responsibility of the student to do the homework assignments and to be prepared for these quizzes. The quizzes will appear in the same location as the weekly assignments.

Exams:
50% will come from the exams in class. There will be 4 major exams. It is the student's responsibility to follow the homework schedule and be aware of exam dates. If a student does not complete the exam during the allotted time period, the student will receive a zero on the exam. Make-up exams are not provided. All students will be required to take a proctored cumulative mid-term exam and final exam. Arrangements will be made for students to complete these exams.

Mission Statement

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Exam Review:
Each exam has a corresponding review. The questions on the review will be similar to the homework/quizzes. You can complete the review exams as many times as you wish. You will not receive a formal grade for the exam reviews. The purpose is to provide you with a review prior to the actual exam

Final Exam:
You will have to come into the college to take the comprehensive exam. You must come into the Southside campus. If you are not local to these areas, you can arrange proctoring at a local college near you. **Contact the instructor for more information prior to a week before the final**. Do not wait until the last minute to find a place to take the test I will not contact the institution and make arrangements the week of finals, please plan ahead. Once again you will only have one week to take the exam and there will be **NO** extensions. Plan with your work or babysitters accordingly so you can take it during the days allowed.

The Final Exam will be available December 14th – December 18th.

A cumulative final exam will be given according to the college final exam schedule. The final exam is worth 20% of your total grade. **It is not acceptable to miss the final exam.** Only under extreme circumstances will a make-up final exam be allowed. The student must present his/her case to the Vice-President of Academic Affairs and receive an excuse to be eligible for a make-up final exam.

Attendance and Participation Policy: You will be required to log into the class a minimum of 2-3 times weekly and complete work both online within the course management system and on your personal computer in order to stay up with the class. Pay close attention to deadlines, and allow yourself plenty of time to complete assignments, discussion questions, quizzes, and exams.

Weekly attendance for an online class runs from 12:00 a.m., Monday, until 11:59 p.m. the next Sunday. You MUST log in at least once during that week, or you will be counted absent.

In addition to logging into Angel you must also log into MyMathLab once during this time frame and complete 50% of assignments and/or Tests in order to be considered attending the course.

Students are expected to maintain satisfactory progress in this class. Satisfactory progress includes completion of assignments and participation in learning activities on a regular basis as stated in this syllabus. Students should not neglect class participation for any reason other than an emergency, as determined by the instructor. Students are responsible for contacting the instructor in a timely manner should an emergency occur.

Mission Statement

As an institution of higher learning, the mission of Wichita Area Technical College is to provide relevant, technical education for employment and lifelong learning.

Successful completion of this online course requires active, frequent participation, and students must show continued progress throughout the course. Students who fall behind more than two weeks in course work may be denied access to the course and must contact the instructor to regain access. Denying access does not constitute an official drop from the course, as it is your responsibility to officially withdraw.

Excessive absences may result in the student not meeting the competencies of the course. Behavioral or disruptive issues may result in the student being withdrawn from the class at the request of the instructor by the Registrar. It is the student's responsibility to withdraw from the course for reasons of academic performance through the Registrar's Office.

Late Work: None will be accepted. Each assignment must be completed within the one-week window (don't wait until the last minute). Something will come up during the semester that will cause you to miss the deadline. Every semester, students have funerals to attend, flu, work obligations, sick children, etc. (this happens to instructors also!). If you have something happening in your life that causes you too miss a huge amount of work you might want to consider withdrawing from the course and taking it again next semester. **Do not ask for the due dates to be adjusted, due dates will not be adjusted.** The instructor has the right to open any and all assignments and tests for the whole class or individual students.

Extra Credit: No extra credit will be offered in this course.

Last Day to Withdraw with a "W"- November 16, 2009
It is the student's responsibility to visit with their academic advisor prior to withdrawing from a class and to complete the appropriate withdrawal form and submit it to the Registrar's office.

Online Course Behavior
To allow for orderly learning and communication, students are to follow the rules of online courtesy, including refraining from use of sexist, racist, off-color, or demeaning language or behavior, sometimes referred to as flaming. This is a college course, and student vocabulary and word choice should be appropriate to a college classroom. Students will stay on-topic, handling non-class related matters over off-line posts. The instructor is the ultimate authority and will delete any inappropriate posts.

Communication:
All communication between WATC faculty, administration, staff and advisors will be directed to the student email account. Example: smithj123456@watc.edu. It is the student's responsibility to check their WATC email account frequently.

Attendance Policy:

At the beginning of each grading period, the instructor shall publicize his/her class policies. Excessive absences may result in the student not meeting the competencies of the course. Behavioral or disruptive issues may result in the student being withdrawn from the class at the request of the

instructor by the Registrar. It is the student's responsibility to withdraw from the course for reasons of academic performance through the Registrar's Office.

1. Each instructor shall publicize, both orally and in written form, to the students in his/her class, the attendance, course requirements, and grading policies which are in accordance with College policy.
2. The student should adhere to the individual instructor's policy with regards to attendance.
3. Late registrations will be accepted by the Registrar with concurrence of the instructor involved and approval of the Chief Academic Officer (CAO). Days missed will be counted as authorized absences.
4. Absence from class may be authorized by the CAO for participation in College sponsored activities or to represent the institution in an official capacity.
5. Before an instructor is permitted to submit to the Registrar a request for withdrawal of a student from classes, an incident report must be initiated by the instructor stating the specifics of the behavioral or disruptive issue. It is the responsibility of the instructor to file this report with the Instruction Office.
6. A student may petition for reinstatement in the class within five days of notification of withdrawal, according to provisions of Section 262.00 of the Policy Manual.

(Institutional Policies: Academic Affairs Council: Series 200.00: 257.00 Attendance and Classwork)

Disability Services Program:
Wichita Area Technical College, in recognition of state and federal laws, will accommodate a student with a documented disability. If you have a disability which may impact your work in this class and for which you require accommodations, please contact Jessica Ross, Administrator, Learner Success. Phone number: Main Campus: (316) 677-9537. E-mail: jross@watc.edu.

Academic Honesty
Students who compromise the academic integrity of the classroom, laboratory, internship or clinical areas are subject to disciplinary action, which may result in suspension and/or expulsion from WATC. Violations of academic honesty include, but are not limited to, cheating, plagiarism, falsification, forgery or alteration of records.

Attendance
One of the primary objectives of the College is to simulate the real world of work so that students may develop proper work attitudes. Therefore, students are expected to attend all classes because absences can seriously disrupt a student's progress. Times may exist when a student is unable to attend class; in such cases, the student is responsible for making arrangements with the instructor to complete missing work. All make – up work will be at the discretion of the instructor. Any Student more that fifteen (15) minutes late to class will be considered absent for that entire class period.

Mission Statement

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Grading System

WATC issues letter grades to communicate the student's level of achievement or competency. It is important to note the credit points and the meaning of each letter grade.

Letter Grade	Grade Description
A	Superior achievement (credit awarded)
B	Above average achievement (credit awarded)
C	Average achievement (credit awarded)
D	Below average achievement (credit awarded, but does **not** satisfy graduation requirements in occupational specific/core courses)
F	Failing work (no credit awarded)
CE	Credit by exam (credit awarded)
S	Satisfactory achievement
U	Unsatisfactory achievement (no credit awarded)
W	Withdrawn (no credit awarded)
I	Incomplete
N	Grade not submitted
X	Audit (no credit awarded)

Grading Scale

90-100 % = A
80-89 % = B
70-79 % = C
60-69 % = D
0-59 % = F

Incomplete Courses

Students who are unable to complete courses should contact their instructor regarding the incomplete grade. At the instructor's discretion, students may be granted an extension of time to complete assigned work if they are in good standing (have been making a passing grade) and they enter into a contract with the instructor indicating what work must be completed and the time frame for completion. If granted, students receive an incomplete letter grade for the course, which is recorded as an I on the grade report and transcript.

All work for incomplete courses must be satisfactorily completed within four calendar weeks. The instructor then completes the appropriate documentation and submits it to the appropriate department chair for validation. The department chair then submits the validated documentation to the Registrar.

Mission Statement

As an institution of higher learning, the mission of Wichita Area Technical College is to provide relevant, technical education for employment and lifelong learning.

The I automatically becomes an F or U at the end of the four-week period if the change is not requested.

Code of Conduct
WATC strives to make its campuses as representative as possible of business and industry. Thus, all individuals are asked to conduct themselves in a businesslike manner, to avoid disruptive or threatening behavior and to dress appropriately. All individuals are held responsible for their personal actions. These expectations are explained in policies LS 13.0 Student Bill of Rights and LS 14.0 Student Code of Conduct.

Nondiscrimination Statement
WATC does not discriminate with regard to race, religion, color, sex, disability, national origin or ancestry, age or gender in its admissions, progress or activities. Persons having inquiries may contact human resources, 301 S. Grove, Wichita, KS 67211-2099, 316.677.1315.

Compliance Statement
WATC complies 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 chief operating officer, 301 S. Grove, Wichita, KS 67211-2099, 316.677.9400

Notice:
Changes in the course syllabus, procedure, assignments, and schedule may be made at the discretion of the instructor.

Mission Statement

As an institution of higher learning, the mission of Wichita Area Technical College is to provide relevant, technical education for employment and lifelong learning.

WICHITA AREA TECHNICAL COLLEGE

Course Standard

PHS110 Physical Science

Course 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.

Hours

Lecture	90
Lab	0
Credit	5

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to describe the nature of science as a dynamic, ever-changing body of knowledge that is shaped through the use of the scientific method. The student will also gain insight into the fundamental nature and structure of matter and the universe	
Competencies	
Scientific Method and Measurement	Know the steps in the scientific method
	Identify the scientific method at work in the development of the current model of our universe and in the development of the model of the atom
	Understand the importance of mathematics and measurement in science
	Distinguish between fact, law, theory and hypothesis
	Appreciate the importance of honesty, integrity and proper procedure in the reporting of scientific findings
	Understand the origin and significance of the law of universal gravitation
Outcomes: The student will be able to adequately describe linear motion, circular motion and Newton's laws of motion	
Competencies	
Motion	Understand and apply the concepts of average and instantaneous speed
	Understand and apply the concept of circular motion
	Understand and apply the concepts of force and Newton's laws of motion
	Understand and apply the Newton's law of gravitation
Outcomes: The student will be able to adequately describe the basic concepts related to energy	

and heat	
Competencies	
Energy and Heat	Identify examples of kinetic energy and potential energy and show how they relate to the law of conservation of energy
	Give examples of substances with high and low specific heat capacities and relate behaviors of these substances to their respective specific heat capacities
	Give examples of heat transfer through each of the three heat transfer mechanisms; conduction, convection and radiation
	Explain the Greenhouse effect. Include an understanding of the importance of the greenhouse effect to our environment and the role of thermal and environmental pollution in the potential development of global warning
	Appreciate the problems involved in the generation of electricity by solar power
	Apply concepts of heat and energy to weather, especially to violent storms such as tornadoes and hurricanes
Outcomes: The student will be able to adequately describe the basic concepts related to electricity and magnetism	
Competencies	
Electricity and Magnetism	Identify the fundamental source of electricity
	Identify the fundamental source of magnetism
	Compare and contrast Newton's Law of Gravitation for masses with Coulomb's Law for electric charges
	List sources of potential difference (voltage)
	Identify the unit of measurement for electrical quantities; potential difference, resistance, current, power, electric charge
	Appreciate the importance of the development of superconductors
	Distinguish between series and parallel circuits. Identify types of circuits found in household wiring. Explain the need for circuit breakers or fuses
	Explain how a magnet can be made and explain how a magnet can be weakened
	Appreciate the importance of electromagnetic induction and briefly outline how electricity is produced
Outcomes: The student will be able to adequately describe the basic concepts related to sound and light	
Competencies	
Sound and Light	Distinguish between and give examples of transverse waves and longitudinal waves
	Know the speed of sound at room temperature and the speed of light in a vacuum
	Give examples of resonance
	Explain the origin of the Doppler effect and give examples of how the Doppler effect is used in our society
	Identify characteristic sections of the electromagnetic spectrum and list these sections in order of increasing energy

	Describe modern technology that is based on the property of total internal reflection
	Identify significant parts of the human eye and explain how light is processed by each part
	Explain the significance of the photoelectric effect, both in theory and in the design of practical devices
Outcomes: The student will be able to adequately describe the basic concepts of chemistry	
Competencies	
Basic Concepts of Chemistry	Explain the contribution of each of the following to the development of modern chemistry; Democritus, Aristotle, Boyle, Lavoisier, Priestly, Dalton, Avogadro
	Understand and apply the concept of conservation of mass
	Distinguish between physical properties/changes and chemical properties/changes
	Identify elements, compounds and mixtures
	Know characteristics of ionic, covalent and metallic bonds
	Describe the difference between homogeneous and heterogeneous mixtures and between homogeneous mixtures and suspensions
Outcomes: The student will be able to adequately describe the basic concepts related to the atomic nucleus and radioactivity	
Competencies	
The Atomic Nucleus and Radioactivity	Understand the fundamental difference between alpha and beta rays and gamma rays
	Explain the similarity and difference among isotopes of an element. Support with an example
	Appreciate the importance of the strong nuclear force
	Understand the difference between natural and artificial transmutation
	Briefly describe the carbon – 14 dating technique. Give an example. Explain any problems with this method
	Appreciate the risks of radiation exposure from activities in our society and natural substances in our environment
	List advantages and disadvantages of future development and use of nuclear fusion to produce electric power
Outcomes: The student will be able to explain the forces that are responsible for the changes the earth has experienced over the course of history that account for the features that are currently present on the earth's surface, and the student will be able to predict changes that the earth will experience in the future based on these same forces	
Competencies	
Ever-Changing Earth	List four natural phenomena that are constantly at work which change the surface of our planet
	Draw a cross-section of the earth and label the various layers of the earth's interior
	Describe the difference between dip-slip and strike-slip faults

	Outline the theory of Continental Drift. Include evidence that supports this theory
	Outline the Theory of Plate Tectonics. Include evidence that supports this theory
	Define "ring of fire" and explain its origin
	Appreciate how tectonic interactions have changed the earth's surface
Outcomes: The student will be able to describe basic features of our solar system, galaxy and universe, and realize that this science is only in its infancy. In addition, the student will gain an appreciation for the size of the universe as well as participate in reflection upon the origin of the universe	
Competencies	
Astronomy	Explain why we see only one side of the moon
	Understand the origins of lunar and solar eclipses
	List the nine planets of our solar system in order of increasing distance from the sun. Include the location of the asteroid belt
	Know two or three distinguishing characteristics of each planet
	Explain why different constellations appear in the night sky at different times of the year
	Compare and contrast the life cycles of small stars and larger stars
	Give an estimate of the number of galaxies present in our universe
	Define "The Big Bang". List evidence that supports the Big Bank Theory

Suggested Resources

List books, and other resources used here

WICHITA AREA TECHNICAL COLLEGE

Course Standard

PSY 101 General Psychology

Course Description

A general introduction to the scientific study of human behavior as it applies to daily living. The scope of this course includes history, basic theories, biological bases of behavior, development, cognitive processes, individual awareness, motivation, emotion, personal adjustment and social psychology.

Hours

Lecture	45
Lab	0
Credit	3

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to successfully achieve classroom behavior expectations and interact with fellow students appropriately, completing tasks as assigned in a timely manner to insure successful completion of the course	
Competencies	
Personal Management Skills	Attend class on a regular and timely basis
	Written work displays material discussed in class in a clear, concise manner with few grammatical errors
	Oral participation in class reflects clear, concise, thought out views
	Completion of assignment is on or before due date
	Interpersonal skills reflect the ability to work with large and small groups to reach a common goal
Outcomes: The student will be able to successfully demonstrate an understanding of psychology as a scientific discipline, its history, utilization of research methods, and the importance of human diversity as it relates to the field	
Competencies	
The Science of Psychology	Understand psychology as a discipline
	Know the goals of psychology
	Be familiar with research methods used by psychologists
	Trace the development and growth of psychology as a science
	Understand the importance of human diversity in psychology

Outcomes: The student will be able to successfully demonstrate an understanding of the psychological fundamentals of neuroscience, endocrinology, and behavioral genetics	
Competencies	
The Biological Basis of Behavior	Identify the structure and functions of neurons
	Be familiar with the central and peripheral nervous system
	Know the characteristics of the endocrine system
	Understand behavior genetics
Outcomes: The student will be able to successfully demonstrate an understanding of the relationship between sensation and perception and their impact on learning	
Competencies	
Learning	Understand the nature of the sensory processes
	Differentiate between sensory information and perceptual processes
Outcomes: The student will be able to successfully demonstrate an understanding of the levels of consciousness and their susceptibility to controlled substances	
Competencies	
States of Consciousness	Recognize both natural and artificial variations in consciousness
	Be able to explain how drugs alter consciousness
Outcomes: The student will be able to successfully demonstrate an understanding of the psychology of learning, classical and operant conditioning, and cognitive and observational learning	
Competencies	
Learning	Know what psychologists mean by learning
	Be able to recognize examples of both classical and operant conditioning
	Recognize the processes involved in cognitive learning
	Describe how learning through observation occurs
Outcomes: The student will be able to successfully demonstrate an understanding of the influence of sensation on memory, the difference between short and long term memory, sensory and perceptual memory, and their biological foundations	
Competencies	
Memory	Be able to explain the characteristics of the sensory registers
	Understand what is meant by both short and long term memory, their characteristics, and the information they contain
	Be aware of special topics in memory
	Describe what psychologists know about the biological foundations of memory

Outcomes: The student will be able to successfully demonstrate an understanding of the building blocks of thought, methods of problem solving, different types of intelligence including creativity, methods of measuring intelligence, and the concept of standardized intelligence assessments including their strengths and weakness	
Competencies	
Cognition and Mental Abilities	Be able to identify the building blocks of thought
	Utilize problem-solving methods in classroom activities
	Identify the two types of decision making
	Explain what psychologists mean by reliability and validity
	Be able to discuss the determinants of intelligence
	Know the extremes of intelligence
	Understand what is meant by creativity, how it is assess and how it is related to intelligence
Outcomes: The student will be able to successfully demonstrate an understanding of motivational perspectives, drives, stimulus and learned motives, motives as hierarchy, expression of basic motives and gender's impact on emotional expression	
Competencies	
Motivation and Emotion	Be familiar with the different perspectives of motivation
	Know the primary drives
	Differentiate between stimulus motives and learned motives
	Describe how motives can be viewed as a hierarchy
	Recognize the basic emotions, how they're expressed, and the effect on gender on emotional expression
Outcomes: The student will be able to successfully demonstrate an understanding of development from birth through late adulthood, the behavioral influences of physical, cognitive and socio-emotional development, and the developmental impact of both "nature" and "nuture"	
Competencies	
Life Span Development	Trace the processes of development across the life-span (from the prenatal period until death)
Outcomes: The student will be able to successfully demonstrate an understanding of theories of personality; stability v. change, continuity v discontinuity, including various methods of personality assessment`	
Competencies	
Personality	Understand various theories of personality
	Understand how psychologists from different areas view the consistency of personality
	Be familiar with the ways in which personality is accessed
Outcomes: The student will be able to successfully demonstrate an understanding of the etiology of stress, the development of coping strategies, and the correlation between emotional stress and physical health	
Competencies	

Stress and Health Psychology	Know the sources of stress
	Understand how to cope with stress
	Recognize the effect of stress on health
Outcomes: The student will be able to successfully identify the difference between normal and abnormal behavior, the types of abnormal behaviors, and the behavioral impact of gender	
Competencies	
Psychological Disorders	Distinguish the characteristics that constitute abnormal behavior
	Be able to identify the types of disorders
	Describe gender differences in abnormal behavior
Outcomes: The student will be able to successfully identify different approaches to psychotherapy and trends regarding third party coverage	
Competencies	
Therapies	Differentiate between the various types of therapies
	Be familiar with trends in institutionalization and deinstitutionalization
	Summarize gender differences in illness and treatment
Outcomes: The student will be able to successfully demonstrate an understanding of the relationship between socialization and psychological development, and the overlap between the disciplines of psychology and sociology	
Competencies	
Social Psychology	Understand the concept of Social Cognition
	Describe the components and sources of attitudes
	Explain how behavior is influenced by society
	Demonstrate knowledge of social action and its effects
Outcomes: The student will be able to successfully participate in a service learning project, volunteering service hours to a local cause and reporting the experience in a written assignment which will include reflection upon their experience and implementation of psychological concepts learned throughout the course	
Competencies	
Service Learning	Participate in the community as a productive citizen through service learning
	Develop an understanding of Psychological issues in other's lives through participation in the community
	Explain, through reflection, how service learning is related to concepts learned in the classroom; reflection logs, written papers, class presentations
	Student must complete 8 hours of service for the semester. Additionally, all service projects must be pre-approved by the instructor and the instructor will assist in tracking student hours and participation. Service learning will count for no less that 15% of the final course grade.

Suggested Resources

List books, and other resources used here

WICHITA AREA TECHNICAL COLLEGE

Course Standard

SOC101 Principles of Sociology

Course Description

An introductory study to acquaint students with the influence or human behavior. Sociology studies the processes and patterns of individuals and group interaction by acquainting students with the development, characteristics, and functioning of human groups, the relationships between groups, and group influences on individual behavior. It includes the study of how social relationships are created, maintained and changed.

Hours

Lecture	45
Lab	0
Credit	3

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to successfully achieve classroom behavior expectations and interact with fellow students appropriately, completing tasks as assigned in a timely manner to insure successful completion of the course	
Competencies	
Personal Management Skills	Attend class on a regular and timely basis
	Written work displays material discussed in class in a clear, concise manner with few grammatical errors
	Oral participation in class reflects clear, concise, thought out views
	Completion of assignment is on or before due date
	Interpersonal skills reflect the ability to work with large and small groups to reach a common goal
Outcomes: The student will be able to successfully demonstrate an understanding of sociology as scientific discipline, its history, the sociological perspective, sociological theories, and utilization of research methods including the types of sociological research	
Competencies	
Sociology: Theory, and Method	Understand the sociological perspective

	Be familiar with the origins and history of sociology
	Be able to identify the distinctive characteristics of functionalism, conflict theory, and symbolic interactionism
	Distinguish how the scientific method is applied to the study of human society
	In general, be familiar with the four major methods by which sociologists conduct research and with the primary strengths and weakness of each method
Outcomes: The student will be able to successfully demonstrate an understanding of the sociological aspects of culture, the components of culture, the types of cultures, diversity of human cultures, and be able to apply the sociological theories to the study of culture	
Competencies	
Culture	Know how sociologists use the term culture
	Recognize the major components of culture: symbols, language, values and beliefs, norm, and material culture
	Be able to compare and contrast different types of cultures, including the effect of technology
	Be aware of the diversity that exists in human cultures
	Be able to apply each of the sociological theories to the study of culture
Outcomes: The student will be able to successfully demonstrate an understanding of the concept of socialization and how humans are socialization from birth to death, the agents of socialization, the variances in socialization and the process of re-socialization which becomes necessary in societies	
Competencies	
Socialization: From Infancy To Old Age	Define the concept of socialization
	Understand different theories as applied to the socialization process and the development of personality
	Recognize the major agents of socialization and know their impact on the individual
	Be generally familiar with how socialization varies at different stages along the life course
	Identify the two-stage process of re-socialization that occurs in total institutions
Outcomes: The student will be able to successfully demonstrate an understanding of the concept of social interaction and its effect on personal life and society, language, humor, status and roles	
Competencies	
Social Interaction In Everyday Life	Be able to explain the concept of social interaction
	Understand the concepts of status and role and how the interactions between them have an effect on personal life
	Recognize how reality is a social construction and the processes engaged in by humans in its construction

	Define dramaturgical analysis and discuss its key components
	Be able to apply the principle of social interaction to the concepts of language and humor
Outcomes: The student will be able to successfully demonstrate an understanding of the effect of groups and organizations on society, their distinctions, styles of leadership, characteristics of formal organizations and functions of groups and organizations within societies and in the global community	
Competencies	
Groups and Organizations	Understand the distinctions between groups, aggregates, and categories
	Recognize the different styles of leadership discussed in the chapter: instrumental/expressive and democratic/authoritarian/laissez-faire
	Be familiar with the characteristics of formal organizations
	Compare and contrast the functions of groups and organizations from a global perspective
Outcomes: The student will be able to adequately describe the basic concepts related to sexuality and society	
Competencies	
Sexuality and Society	Understand the distinctions between groups, aggregates, and categories
	Be familiar with sexual attitudes in the United States
	Know the basis of sexual orientation, the extent of homosexuality, and the effect of the gay rights movement
	Recognize the major sexual controversies
	Be able to apply three sociological paradigms to the study of sexuality
Outcomes: The student will be able to adequately describe the basic concepts related to deviance as it relates to sociological issues	
Competencies	
Deviance	Define the sociological concept of deviance
	Be able to discuss varying theories concerning deviance, including the biological, personality, and social foundations
	Apply the major sociological theories to the study of deviance
	Understand the effect of social diversity on deviance
	Be aware of the major types of crimes
	Identify the three key elements of the criminal justice system
Outcomes: The student will be able to successfully demonstrate an understanding of the concept of social stratification and its four fundamental principles, class and caste systems, sociological theories, its global perspective and the class system in the United States including the extent and effects on poverty in the United States	
Competencies	
Social Stratification	Be able to discuss the concept of social stratification and its four underlying fundamental principles

	Compare and contrast class and caste systems
	Apply the major sociological theories to stratification
	Understand stratification from a global perspective
	Be familiar with the class system in the United States, including existing inequalities, the six social classes, and the impact that class has on the individual's life and chances for mobility
	"Know the extent" of an effects of poverty in the United States
Outcomes: The student will be able to successfully demonstrate an understanding of the concept of global stratification, its importance versus merely a societal perspective, global poverty, modernization and inequity	
Competencies	
Global Stratification	Recognize why it is important to develop a global rather than merely a societal perspective
	Be familiar with the income distinctions between countries and understand the seriousness of global poverty
	Apply modernization and dependency theories to global inequality
Outcomes: The student will be able to successfully demonstrate an understanding of the concept of gender stratification, including the differences between sex and gender, socialization as applied to the topic, feminism, and the application of the sociological theories to gender stratification	
Competencies	
Gender Stratification	Understand the fundamental distinction between sex and gender
	Discuss the socialization process as it applies to gender and gender roles
	Be aware of the influence of gender on social stratification
	Apply the structural functional and conflict theories to the study of gender
	Define feminism and be able to identify the basic ideas of, the variations in, and the opposition of feminism
Outcomes: The student will be able to successfully demonstrate an understanding of the concepts of race and ethnicity, their relationship to prejudice and discrimination, stereotypes, minority groups in the United States and the development of affirmative action	
Competencies	
Race and Ethnicity	Understand how sociologists define the terms race, ethnicity, and minority
	Be able to discuss prejudice and discrimination and how they relate to one another
	Define the concepts of stereotypes and racism
	Be familiar with the four patterns of minority-majority interaction outlined in the text
	Compare and contrast the experiences of the social histories of the major United States minority groups
	Be aware of the arguments for and against affirmative action
Outcomes: The student will be able to successfully demonstrate an understanding of the concepts of economics and politics and how they relate to societies both today and throughout history, major	

economic systems, corporate structures, and be familiar with major political systems focusing on the United States political system, including how the economic systems and political systems are related to each other	
Competencies	
Economics and Politics	Give a historical overview of the economy
	Compare and contrast the major economic systems
	Understand employment in a postindustrial economic system
	Be able to explain the idea of corporations
	Compare and contrast the major types of political systems
	Be generally familiar with the United States political spectrum
	Apply the structural functionalist and conflict theories to the study of politics
	Be familiar with the five factors which commonly promote war
Outcomes: The student will be able to successfully demonstrate an understanding of the concepts of family and religion and their functions and relationships to society, their effects on society, analyzing each with the major sociological theories	
Competencies	
Family and Religion	Define family from the sociological perspective and know the global variations that exist
	Apply the three major theoretical perspectives to the family
	Identify the stages of family life
	Understand the effects that race, class, and gender have on families in the United States
	Be able to discuss the transitions and problems common to family life, including divorce, remarriage, and violence
	Recognize alternative family forms
	Define religion from the sociological perspective and be aware of the basic concepts involved
	Recognize how each of the three sociological paradigms directs us toward different social aspects of religion
	Be aware of how religion changes as a society undergoes industrialization
	Compare and contrast churches, cults, and sects
	Give a historical account of both religion in general and religion in the United States
Outcomes: The student will be able to successfully demonstrate an understanding of the concepts of education and medicine and their functions and relationships to society, their effects on society, their global perspectives, analyzing each with the major sociological theories	
Competencies	
Education and Medicine	Define education and understand it from a global perspective
	List the major functions of schooling
	Recognize in general the various ways in which schooling tends to benefit children of the powerful more than children of the poor
	Understand the major social problems which affect schools today
	Be able to identify recent issues in United States education, including school

	choice, disabilities, and adult education
	Understand the concepts of medicine and health from a global perspective
	Know the major health related issues in the United States
	Be able to discuss the medical establishment, including its history and present situation
	Apply the major theoretical perspectives to the study of medicine
Outcomes: The student will be able to successfully demonstrate an understanding of the concepts of population, urbanization, and environment, population growth, demography, urbanization as it relates to society, and the effects of a growing global population on the environment	
Competencies	
Population Urbanization, and Environment	Be familiar with the scope of the discipline of demography, including the basic elements of demographic analysis
	Understand the history and the major theories which have been applied to population growth
	Compare and contrast population growth in the north and the south
	Know how sociologists define the term urbanization and how urbanism affects lifestyle
	Understand why the condition of the natural environment is a social issue
	Be familiar with the concepts of ecology, the natural environment, the ecosystem, and the environmental deficit
	Know the major threats to our environment and their potential impact
	Provide a sociological theoretical analysis involving society and the environment
Outcomes: The student will be able to successfully demonstrate an understanding of the concepts of modern and postmodern societies and their relationship to social change, analyzing each with the major sociological theories	
Competencies	
Social Change: Modern and Postmodern Societies	Know how sociologists use the term social change and be aware of the four general characteristics of social change
	Be generally familiar with the five broad causes of social change
	Define modernity and understand the various viewpoints relevant to the concept
	Apply structural functionalism and conflict theory to modern life
	Understand the effect that modernity has on individual behavior
	Identify the major elements of the postmodern critique of modernity
Outcomes: The student will be able to successfully participate in a service learning project, volunteering service hours to a local cause and reporting the experience in a written assignment which will include reflection upon their experience and implementation of sociological concepts learned throughout the course	
Competencies	
Service Learning	Participate in the community as a productive citizen through service learning

	Develop a deeper understanding of the ways that society and group membership affect individual lives
	Explain, through reflection, how service learning is related to concepts learned in the classroom; reflection logs, questions developed by the instructor or the service learning office, a written paper or class presentation
	Students must complete no less than 5 hours of service in the semester
	Hours must be approved through ACES. Instructors will work with ACES to track student hours
	Service learning will count for no less than 15% of the final course grade

Suggested Resources

List books, and other resources used here

WICHITA AREA TECHNICAL COLLEGE

Course Standard

SPH101 Public Speaking

Course Description
Fundamental basic to all good private and public speaking experiences; elements in voice production and improvement, bodily movement, confidence, poise, understanding of all types of public speeches. Required of all transfer curricula.

Hours

Lecture	45
Lab	0
Credit	3

Prerequisite/Core requisite:

Course Guide

Outcomes: The student will be able to construct and support a message appropriate to the purpose target audience using clear organization	
Competencies	
Speech Writing	Select a topic appropriate to the assignment and purpose
	Develop an outline by formulating a thesis statement and providing adequate support material
	Arrange information in a logical sequence and with appropriate organizational patterns
	Demonstrate understanding of the power of language by selecting words that are appropriate to the topic, audience, purpose, context and speaker
Outcomes: The student will be able to transmit the message by using strong delivery skills	
Competencies	
Speech Delivery	Display proper vocal variety, rate, pitch and intensity
	Demonstrate proper articulation and enunciation skills
	Display appropriate language to a targeted audience
	Demonstrate non-verbal behavior that supports the verbal message
Outcomes: The student will develop interpersonal skills suitable to the context and the audience	
Competencies	
Interpersonal Skills	Critique and analyze the content and delivery of a speech from an oral presentation

	Demonstrate competence and poise in fielding audience questions
	Model appropriate conversational mode through self-presentation and response to feedback
Outcomes: The student will develop critical comprehension listening skills	
Competencies	
Critical Listening	Recognize and identify key points
	Identify and evaluate support material
	Identify organizational relationships
	Retention of main ideas, reasoning and evidence
Outcomes: The student will demonstrate ethical speaking, and listening with critical comprehension	
Competencies	
Ethical Public Speaking	Demonstrate a willingness to listen when setting, speaker to topic may not be conducive to listening
	Differentiate between statements of fact and inference
	Distinguish between emotional and logical arguments, detect bias, and recognize the speaker's agenda
	Recognize discrepancies between speaker's verbal and non-verbal messages
	Demonstrate active listening skills

Suggested Resources

List books, and other resources used here

WICHITA AREA TECHNICAL COLLEGE

Course Syllabus
Interpersonal Communications
SPH111 H001 Summer 2009

Credit hours 3
Instructor: Linda Hamm
Office Phone: (316) 640-8161
E-Mail: lhamm@watc.edu

Office Hours/Hours of Availability:
As I do not have an office on campus, you may call my cell phone at (316) 640-8161 or e-mail me, and I will gladly schedule an appointment with you.

Textbook:
Inter-Act. 11th Ed. Interpersonal Communication concepts, skills, and contexts. Verderber, Verderber, & Fink. Oxford University Press. (2007)

Purpose or Goal of the Class:
To become aware of and improve on face-to-face communication skills in various contexts.

Objectives of this Course:
1. Demonstrate an understanding of the interpersonal communication process.
2. Apply interpersonal communication concepts such as listening, perception, self-concept, and message systems (language and nonverbal) to everyday communication situations.
3. Demonstrate understanding of the differences in interpersonal communication in contexts such as families, friendships, and employment situations.
4. Demonstrate appropriate interpersonal communication skills such as managing conflict, self-disclosing, and active listening.
5. Identify own patterns of functional and dysfunctional interpersonal communication.

Virtual Office Hours/Hours of Availability: I will be online and checking the course on Monday & Wednesday afternoons, and at some point over the weekends. Please, however, allow me at least 24 hours response time to your questions and/or concerns.

Communication:
All communication between WATC faculty, administration, staff and advisors will be directed to the student email account. Example: jsmith@watc.edu. Common names may have a number after the last name and before the @ sign. Your specific email address will

be sent to you in a mailed letter which is sent after you are enrolled and financial arrangements have been made for the course. Your instructor also has your email address on their class roster. **It is the student's responsibility to check their WATC email account frequently.**

Computer Requirements: Taking an online hybrid class requires you to have access to a computer (with Internet access) to complete and upload your assignments. It is your responsibility to have (or have access to) a working computer in this class. ***Assignments and tests are due by the due date, and personal computer technical difficulties will not be considered reason for the instructor to allow students extra time to submit assignments, tests, or discussion postings.*** If you have technical difficulties in the course, there is also an online help desk available to you. Review the WATC Online Homepage for specific times (http://www.watc.edu/distance-overview.php). The Academic Success Center is the location where students can work on computer assignments.

Notice:
Changes in the course syllabus, procedure, assignments, and schedule may be made at the discretion of the instructor.

Assignments:
Application Journals: 5 at 25 points each for a total of 125 points. These will be turned in in-class on Fridays. Due dates will appear on the Course Schedule.

Projects Required: There will be in-class experiential projects which can **not** be made up should you miss a day.

Exams: There will be 4 exams which will be an analysis of a video. Your written assessment will be turned in on class dates listed below.
Exam 1 is due on 6/19
Exam 2 is due on 7/3
Exam 3 is due on 7/10
Exam 4 is due on 7/24
Each exam is worth 40 points each for a total of 160 points.
These due dates will also appear on the Course Schedule.

Final Exam: Your final exam is the 4th Video analysis. Discussion of your analysis will be done in class on 7/24. You must be present in class and discuss your findings for the points.

Attendance and Participation Policy: You will be required to log into the class a minimum of 2-3 times weekly and complete work both online and in the classroom. Pay close attention to deadlines, and allow yourself plenty of time to complete assignments, discussion questions, quizzes, and exams.

Weekly attendance for the online class runs from (Noon, Friday), until (11:55pm Thursday). You MUST log in at least once during that week, or you will be counted absent.

Note: To receive your full attendance & participation points, you must A) Post to the discussion board each week and B) be in class. Otherwise, points will be deducted from participation points.

Students are expected to maintain satisfactory progress in this class. Satisfactory progress includes completion of assignments and participation in learning activities on a regular basis as stated in this syllabus. Students should not neglect class participation for any reason other than an emergency, as determined by the instructor. Students are responsible for contacting the instructor in a timely manner should an emergency occur.

Successful completion of this online hybrid course requires active, frequent participation, and students must show continued progress throughout the course. Students who fall behind more than two weeks in course work may be denied access to the course and must contact the instructor to regain access. Denying access does not constitute an official drop from the course, as it is your responsibility to officially withdraw.

Excessive absences may result in the student not meeting the competencies of the course. Behavioral or disruptive issues may result in the student being withdrawn from the class at the request of the instructor by the Registrar. It is the student's responsibility to withdraw from the course for reasons of academic performance through the Registrar's Office.

This is an online hybrid class that requires both online and in-class participation. Attendance is expected through weekly work in ANGEL and through class attendance. If you cannot attend class due to an emergency, please contact the instructor as soon as possible.

Late Work: Late work will not be accepted for any reason. Should you miss a class and **provided you have called me prior to the class**, I will accept your work at the next class period only.

Make Up Work/Tests: Please do not ask me to let you hand in work you have "forgotten" to complete. I will not take late work plus that is not "fair' to those students who complete their work according to the syllabus deadlines.

Extra Credit: Extra credit may be given for this course, with instructor's approval. However, I only give 20 points total for extra credit.

Last Day to Withdraw with a "W"- July 10, 2009

It is the student's responsibility to visit with their academic advisor prior to withdrawing from a class and to complete the appropriate withdrawal form and submit it to the Registrar's office.

Disability Services Program:

Wichita Area Technical College, in recognition of state and federal laws, will accommodate a student with a documented disability. If you have a disability which may impact your work in this class and for which you require accommodations, please contact Jessica Ross, Administrator, Learner Success.
Phone number: Main Campus: (316) 677-9537. E-mail: jross@watc.edu.

Online Course Behavior

To allow for orderly learning and communication, students are to follow the rules of online courtesy, including refraining from use of sexist, racist, off-color, or demeaning language or behavior, sometimes referred to as flaming. This is a college course, and student vocabulary and word choice should be appropriate to a college classroom. Students will stay on-topic, handling non-class related matters over off-line posts. The instructor is the ultimate authority and will delete any inappropriate posts.

Academic Honesty

Students who compromise the academic integrity of the classroom, laboratory, internship or clinical areas are subject to disciplinary action, which may result in suspension and/or expulsion from WATC. Violations of academic honesty include, but are not limited to, cheating, plagiarism, falsification, forgery or alteration of records.

Attendance

One of the primary objectives of the College is to simulate the real world of work so that students may develop proper work attitudes. Therefore, students are expected to attend all classes because absences can seriously disrupt a student's progress. Times may exist when a student is unable to attend class; in such cases, the student is responsible for making arrangements with the instructor to complete missing work. All make – up work will be at the discretion of the instructor. Any Student more that fifteen (15) minutes late to class will be considered absent for that entire class period.

Grading System

WATC issues letter grades to communicate the student's level of achievement or competency. It is important to note the credit points and the meaning of each letter grade.

Letter Grade	Grade Description
A	Superior achievement (credit awarded)
B	Above average achievement (credit awarded)
C	Average achievement (credit awarded)
D	Below average achievement (credit awarded, but does **not** satisfy graduation requirements in occupational specific/core courses)
F	Failing work (no credit awarded)
CE	Credit by exam (credit awarded)
S	Satisfactory achievement
U	Unsatisfactory achievement (no credit awarded)
W	Withdrawn (no credit awarded)
I	Incomplete
N	Grade not submitted
X	Audit (no credit awarded)

Grading Scale

90-100 %=	A	500 – 450	A
80-89 % =	B	449 – 399	B
70-79 % =	C	398 – 348	C
60-69 % =	D	347 – 297	C
0-59 % =	F	296 – 0	F

Grades based on the following assignments & points:

Application Journals – 5 @ 25 points each	125
Exams – 4 @ 40 each	160
Participation 5 points each day	80
Discussion Questions – 6 @ 20 points each	120
Bonus Assignment	10
Course Evaluation	5

Incomplete Courses

Students who are unable to complete courses should contact their instructor regarding the incomplete grade. At the instructor's discretion, students may be granted an extension of time to complete assigned work if they are in good standing (have been making a passing grade) and they enter into a contract with the instructor indicating what work must be completed and the time frame for completion. If granted, students receive an incomplete letter grade for the course, which is recorded as an I on the grade report and transcript.

All work for incomplete courses must be satisfactorily completed within four calendar weeks. The instructor then completes the appropriate documentation and submits it to the appropriate department chair for validation. The department chair then submits the validated documentation to the Registrar. The I automatically becomes an F or U at the end of the four-week period if the change is not requested.

Code of Conduct

WATC strives to make its campuses as representative as possible of business and industry. Thus, all individuals are asked to conduct themselves in a businesslike manner, to avoid disruptive or threatening behavior and to dress appropriately. All individuals are held responsible for their personal actions. These expectations are explained in policies LS 13.0 Student Bill of Rights and LS 14.0 Student Code of Conduct.

Electronic Devices

Cellular phones, pagers, MP3 players, I-Pods, and other electronic devices shall not be used in a manner that causes disruption in the classroom, library or within any college-owned or college-operated facilities. This includes abuse of cellular devices with photographic capability. Utilizing these devices for the purposes of photographing test questions or other forms of academic misconduct or illegal activity is prohibited, as is

photographing individuals in secured areas such as lavatories or locker rooms. Taking photographs of any individuals against their will is strictly prohibited.

Nondiscrimination Statement
WATC does not discriminate with regard to race, religion, color, sex, disability, national origin or ancestry, age or gender in its admissions, progress or activities. Persons having inquiries may contact human resources, 301 S. Grove, Wichita, KS 67211-2099, 316.677.1315.

Compliance Statement
WATC complies 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 chief operating officer, 301 S. Grove, Wichita, KS 67211-2099, 316.677.9400

Notice:
Changes in the course syllabus, procedure, assignments, and schedule may be made at the discretion of the instructor.

COURSE SCHEDULE	
Dates	***Activities, Assignments, Due Dates***
Week 1 6/5 to 6/11	**Introduction, Syllabus Review, Computer Instruction** **Bonus Assignment: Discussion Board Posting to Instructor** Read Chapter 1
Week 2 6/12 to 6/18	Read Chapters 2 & 3 Discussion Question #1 due by 6/18 Exam 1 – Video Assignment due 6/19 In-class exercise – Gendered Perceptions of Relational Interaction
Week 3 6/19 to 6/25	Read Chapters 4 & 5 In-class exercise – Change & language Discussion Question #2 due by 6/25 Application Journal Assignment #1 & 2 due 6/19
Week 4 6/26 to 7/2	Read Chapters 6 & 7 Discussion Question #3 due by 7/2 Application Journal Assignment #3 due 6/26
Week 5	Read Chapters 8 & 9 In-class exercise – Owning feelings Discussion Question #4 due by 7/8

7/3 to 7/9	Application Journal Assignment #4 due 7/3 Exam 2 – Video Assignment due 7/3
Week 6 7/10 to 7/16	Read Chapters 10 & 11 In-class exercise – Assertiveness Inventory Discussion Question #5 due by 7/16 Exam #3 – Video Assignment due 7/10
Week 7 7/17 to 7/23	Read Chapters 12 & 13 In-class exercise - Forgiveness Discussion Question #6 due by 7/23 Application Journal #5 due 7/17
Week 8 7/24	Exam 4 – Video Assignment due 7/24 Discussion of Final Exam Video Wrap-up

Appendix E

KBOR
CA-1a Form (2009)

2009/2010

IMPLEMENTATION YEAR

Fiscal Summary for Proposed Academic Programs

Institution: Wichita Area Technical College
Proposed Program: Applied Science of Aviation Interiors

Part I. Anticipated Enrollment	Implementation Year	
	Full-Time	Part-Time
A. Headcount:	12	0
B. Total SCH taken by all students in program	12 x 60 credit hours = 720	
Part II. Program Cost Projection		
A. In implementation year one, list all identifiable General Use costs to the academic unit(s) and how they will be funded..		
	Implementation Year	
Base Budget Salaries	$62,234	
Other Expenses	$5,350	
Total	$67,584	

Indicate source and amount of funds:

Introduction salary is allocated using WATC general funds.

Submit the completed document to the following:

Director of Technical Programs & Curriculum
Kansas Board of Regents
1000 SW Jackson, Ste. 520
Topeka, KS 66612-1368

Appendix F

KANSAS BOARD OF REGENTS
PERKINS APPROVED PROGRAM VERIFICATION

FY2010

Name of Institution: Wichita Area Technical College **Date of Submission: 2/26/10**

Program CIP Code: 480799 **Program Name: Applied Science of Aviation Interiors**

Program Status: ☒ Active ☐ Inactive

Award Level: ☒ AAS ☐ AS **Credit Hours Required: 60** **Total Technical Cr, Required: 40**

☐ Technical Certificate **Credit Hours Required:** **Total Non-Tech Cr. Required: 20**

Certificates of Completion

☐ Adult-Short Term Training **Credit Hours Required:**

☐ **Business & Industry Training** **Credit Hours Required:**

☐ **Apprenticeship** **Credit Hours Required:**

Associate degree programs must have at least 55% of the total program credit hours from technical courses for Perkins approval.

R-Required E-Elective	T-Technical G-General Education	Course Name	Credit Hours
R	T	Aerospace Safety	1
R	T	Applied Shop Math	2
R	T	Precision Instruments	1
R	T	Geometric Dimensioning & Tolerancing	1
R	T	Quality Control Concepts	1
R	T	Aircraft Familiarization	1
R	T	Aerospace Blueprint Reading	2
R	T	Fundamentals for Aerospace Manufacturing	1
R	T	Aircraft Systems & Components	4
R	T	Enovia DMU	2
R	T	Hand & Power Tools	2
R	T	Regulatory Requirements	1
R	T	Aircraft Interior Installer I	4
R	T	Aircraft Interior Installer II	5
R	R	Aircraft Interior Installer III	6
R	R	Technical Co-Operative Project for Aviation Interior Installation OR	4
R	R	Integrated Assembly Capstone Project	4
R	R	Global Professional Standards	2
R	G	Computer Applicatons	3
R	G	Composition I	3
R	G	College Algebra OR	3
R	G	Intermediate Algebra	3
R	G	Physical Science	5
R	G	General Psychology OR	3
R	G	Principles of Sociology	3
R	G	Public Speaking OR	3
R	G	Interpersonal Communication	3

Signature of Administrator — Senior Vice President, Academic Affairs (Title) — 2/26/2010 (Date)

Submit one copy to the Career and Technical Education office, Kansas Board of Regents, 1000 SW Jackson Street, Suite 520, Topeka, KS 66612-1368.

FOR STATE USE ONLY: ☐ Approved for Perkins Funding ☐ Not Approved for Perkins Funding

Director, Career and Technical Education

Date

KANSAS BOARD OF REGENTS
PERKINS APPROVED PROGRAM VERIFICATION

FY2010

Name of Institution: Wichita Area Technical College **Date of Submission: 2/26/2010**

Program CIP Code: 150801 **Program Name: Composite Technology**

Program Status: ☐ Active ☐ Inactive

Award Level: ☐ AAS ☐ AS **Credit Hours Required:** 47 **Total Technical Cr, Required: 42**

☒ Technical Certificate **Credit Hours Required:** **Total Non-Tech Cr. Required: 5**

Certificates of Completion

☐ Adult-Short Term Training **Credit Hours Required:**

☐ Business & Industry Training **Credit Hours Required:**

☐ Apprenticeship **Credit Hours Required:**

Associate degree programs must have at least 55% of the total program credit hours from technical courses for Perkins approval.

R-Required E-Elective	T-Technical G-General Education	Course Name	Credit Hours
R	T	Aerospace Safety	1
R	T	Applied Shop Math	2
R	T	Precision Instruments	1
R	T	Aircraft Familiarization	1
R	T	Aerospace Blueprint Reading	2
R	T	Aircraft Systems & Components	4
R	T	Enovia DMU	2
R	T	Introduction to Composites	2
R	T	Composite Finish Trim	2
R	T	Composite Assembly	2
R	T	Composite Fabrication Methods/Applications	2
R	T	Composite Inspection	2
R	T	Disassembly & Damage Removal Techniques	3
R	T	Composite Repair	4
R	T	Complex Composite Repairs	3
R	T	Electrical Bonding Repair	1
R	T	Global Professional Standards	2
R	T	Fundamentals of Quality Control	3
R	T	Lean Manufacturing	3
R	G	Computer Essentials	2
R	G	Interpersonal Communication	3

Signature of Administrator — Title: Senior Vice President, Academic Affairs — Date: 2/26/2010

Submit one copy to the Career and Technical Education office, Kansas Board of Regents, 1000 SW Jackson Street, Suite 520, Topeka, KS 66612-1368.

FOR STATE USE ONLY: ☐ **Approved for Perkins Funding** ☐ **Not Approved for Perkins Funding**

Director, Career and Technical Education — Date

10/01/2007

Appendix G

Meeting Notes

Applied Science of Aviation Interiors Curriculum Committee

Tuesday, December 8, 2009 11:00 a.m.

Members:

	Angie Jackson – *Yingling Aviation*		Kent Irick – *Cessna*	x	Diane Wright – *WATC*
	Derek Penn - *Bombardier*	x	Jerry McDonald – *Cessna*		Patty Aubert – *WATC*
	Debby Alford - *Bombardier*		Jesse Acosta – *Hawker Beechcraft*		Shanna Roberson - *WATC*
x	Jerald Lazar - *Boeing*		Kiley Sizemore – *Hawker Beechcraft*	x	Larry Bay
	Brice Smith - *Boeing*		Darren Moore – *Global Engineering & Technology Inc*		Roxanne Howell – *Cessna*

Meeting Objectives/Agenda

1. Review Course Standards
2. Other Items

Meeting Agreements

Who	What	By When

Discussion:

- Revised course sequences were distributed and reviewed
- Team approved unanimously the Applied Science of Aviation Interiors course sequence and curriculum
- Letters of support needed for KBOR approval:
  - Cessna
  - Boeing
  - Larry Bay - Consultant

Next Meeting

COMPOSITE TECHNICIAN CURRICULUM COMMITTEE MEETING SIGN-IN SHEET

Meeting Date: 1/27/09 | **Place/Room:** WATC, Main Campus, Room B11

Name	Title	Company	Phone	Address	E-Mail
Larry Keyser		Hawker Beechcraft			
Jon Pine	Composite Instructor	WATC	677-9507	301 S Grove Wichita KS 67211	jpine@watc.edu
Bart Steele	Composite Instructor	WATC		301 S Grove Wichita KS 67211	bsteele@watc.edu
Sue Roth-Kilian	Composite Instructor	WATC	305-5123	301 S Grove Wichita KS 67211	sroth-kilian@watc.edu
Shanna Roberson	Administrative Assistant, Research & Development Department	WATC	677-9538	301 S Grove Wichita KS 67211	sroberson@watc.edu
Trish Schmidt	Manager, Curriculum Development Research & Development Department	WATC	677-9550	301 S Grove Wichita KS 67211	tschmidt@watc.edu
Patty Aubert	Coordinator, Curriculum Development Research & Development Department	WATC	677-9460	301 S Grove Wichita KS 67211	paubert@watc.edu
Diane Wright	Vice President Research & Development Department	WATC	677-9515	301 S Grove Wichita KS 67211	
Sarah Leftwich	Associate Vice President Academic Affairs	WATC		301 S Grove Wichita KS 67211	sleftwich@watc.edu
Sheree Utash	Vice President Academic Affairs	WATC		301 S Grove Wichita KS 67211	sutash@watc.edu

AVIATION INTERIOR INSTALLATION - CURRICULUM COMMITTEE MEETING SIGN-IN SHEET

Meeting Date: Tuesday, December 8, 2009 **Place/Room:** WATC, NCAT Room G109

Instructions: Initial by your name *Please fill in any missing information*

Name	Title	Company	Phone	Address	E-Mail
Kiley Sizemore		Hawker Beechcraft	207-8104 - Cell		kiley_sizemore@hawkerbeechcraft.com
Jesse Acosta		Hawker Beechcraft	946-4300		Jesse_acosta@hawkerbeechcraft.com
Darren Moore	Customer Service & Refurbishment Manager	Global Engineering & Technology Inc	729-9232 640-0852 – cell	4848 W Irving	ddmoore@gogeti.com
Angie Jackson	Director of Interior Completions	Yingling Aviation	943-3246		ajackson@yinglingaviation.com
Derek Penn		Bombardier			derek.penn@aero.bombardier.com
Debby Alford		Bombardier			debby.alford@aero.bombardier.com
Jerry McDonald	TSR Team Service Rep	Cessna			JWMcDonald@cessna.textron.com
Kent Irick		Cessna			gkirick@cessna.textron.com
Larry Bay			797-4419 – cell		Larry.bay@att.net
Jerald Lazar	USAF Tanker Modification IPT Leader	Boeing	304-5458 – cell		Jerald.F.Lazar@boeing.com
Roxanne Howell	Manager Refurbs	Cessna			RGHOWELL@cessna.textron.com
Jeffery Schommer		Boeing			Jeffery.L.Schommer@boeing.com
Frank Roesch		Boeing			
Diane Wright	Vice President, Research & Development Department	WATC	677-9515	301 S Grove Wichita KS 67211	dwright@watc.edu

Ed Affairs
Minutes for February 9, 2010
SSEC Center - B115 Conference Room

Sheree Utash		Sherry Parsons	x				
Scott Lucas	x	Denice Klassen	x	Linda Grossman	x		
Leslie Berryhill	x	Bridget Mack	x	Tara Canfield	x		
Learta Watkins	x	Cynthia Wesson	x			Trish Schmidt	x
Sarah Leftwich						Shane Hilt	x

Minutes Recorder: Sherry Parsons/Shane Hilt

Meeting Notes:

- **Agenda Item/Topic**: August 6, 2009 Meeting Minutes
  - **Discussion**: no revisions needed
  - **Motion**: motion to approve, motion carried
- **Agenda Item/Topic**: Curriculum approval
  - **Discussion**: Outlines submitted for approval
    - Applied Science of Aviation Interiors - Technical Certificate and Associate of Applied Science: program description and program outline presented for both tracks; uses pieces of former cabinet making program, uses blueprinting, core courses for aviation; key points clarified, questions answered; typo noted in description of 17 hours, should be 20 hours for gen ed. To be corrected
      - ✓ Motion to approve program by Sherry, Linda 2nd; majority vote: approve program
    - Robotics – Technical Certificate and Associate of Applied Science: program outline for both tracks presented; will be aligned with ABET for purposes of future accreditation after data collection; coop effort between several entities
      - ✓ Motion to approve program by Sherry, Bridget 2nd; majority vote: approve program
- **Agenda Item/Topic**: 2/16/10 ADDENDUM to minutes - processed via email conversations
  - **Discussion**: Outline submitted for approval
    - Applied Science of Aviation Manufacturing: Composite Technology – Technical Certificate: program description and program outline presented, additional track
      - ✓ Majority vote: approve program

Handouts Distributed:

- Agenda
- Minutes from August 6, 2009 meeting distributed for review.
- Program Curriculum/Outlines - Applied Science of Aviation Interiors TC & AAS, Robotics TC & AAS, Applied Science of Aviation Manufacturing Composite Technology

Next Meeting:

- TBD

Sedgwick County Technical Education and Training Authority
The Governing Board of Wichita Area Technical College
Board Minutes
Thursday, February 18, 2010

	Sedgwick County Technical Education and Training Authority Governing Board of Wichita Area Technical College, Sedgwick County, Kansas, met in regular session at **NCAT Campus Room G-113**, 4004 North Webb Rd., Wichita Kansas, at **3:00 pm**, on **February 18, 2010.** **Present:** Jim Walters, Jeff Turner, Lyndon Wells, Dave Unruh, Kim Shank, Sharon Fearey, Cindy Hoover, Rich Jiwanlal **Absent:** John Dieker, Scott Strode
Committee Reports	**Facilities Committee** NCAT (Phase II) – Randy Roebuck *(items presented for information purposes only)* -The contractor lost 12 days due to weather, but believes they can meet the August date -Phase II completion late May early June. We are still on schedule for moving this summer and moving equipment in July -Phase II hanger is completely closed -On schedule for opening in August -The FFE budget is over and WATC will utilize existing furniture to bring the budget in line -The Taxiway budget is over $700K. The County had a meeting and is trying to figure this out -The City of Wichita donated artwork to NCAT titled "Flight" which is made of limestone -The exterior sign on Webb Rd should be up in April -The landscaping is scheduled to start in the Spring -NIAR and WATC decided to start a war room so we can review room by room and miss nothing Miscellaneous items– Randy Roebuck -The Blue Skies Bistro opened at Southside Campus on Monday, February 15, 2010. WATC will receive a percentage -WATC continues to talk with USD259 regarding Grove Campus -Ray Frederick and Sharon Fearey visited with Marlin Penner requesting he look at other options for Comotara. Once we have options we will bring them back to the Facilities Committee -Jim Walters had concerns about the programs at Comotara and Sharon assured the Board that the programs will be moved/consolidated Transition – Shirley Antes -Reviewed 4 square and all new items are highlighted in red -Identification of aviation equipment not moving to NCAT -Signage at Grove posted by March 15, 2010 -We will submit HLC change request by April 1, 2010 -The FAA transition plan will be submitted by May 1, 2010 -We are planning on moving Learner Services offices by end of May -We have RFP of IT equipment and classroom configurations outlined -Successfully negotiated utility rates -WATC has a meeting on March 2nd with USD 259 **Finance Committee** – Doug Brantner *(items presented for information purposes only)* -Reviewed the income statements, balance sheets and the projected monthly cash flow statements. -We had a good month -Bookstore revenue is up -We are running at 56% of budget and expenses at 53% of budget -The payroll reflects the furlough we had in December -The Finance Committee continues to look for ways to cut costs

-The Cowley debt is a major problem which needs to be addressed. Several board members wanted an update on Cowley which Jim Walters explained they had a brief meeting with Cowley. Cowley is open to looking at other ideas for instance maybe curriculum they might be able to participate in. We will have more information regarding Cowley at the next meeting.
-Jeff Turner asked how much Comotara costs each month and was informed by Doug Brantner it costs WATC $60,000 a month.
-Ray Frederick explained that Comotara was a 7 year lease and we are 2 years into it, but we have met with Marlin Penner and will be looking at options
-Several board members were interested in the short list contingency and wanted to know when it would be ready to discuss. Doug Brantner did not give a date, but said it need to be real soon because we have hard decisions to make

Curriculum Committee – Diane Wright
-Reviewed Program Development Chart
(items presented for information purposes only)
-Program Approval – Diane Wright
Approval is needed for the following programs, but will not be implemented until we have funding:

Applied Science of Aviation Interiors – Associate of Applied Science
Applied Science of Aviation Interiors – Technical Certificate
Robotics – Associate of Applied Science
Robotics – Technical Certificate
Robotics – Certificate of Completion
LEAN – Certificate of Completion

The above programs were considered and discussed; and thereupon on motion of Board Member Kim Shank, seconded by Board Member Jeff Turner, the above programs were approved

Motion Carried: 8-0 with John Dieker and Scott Strode noted absent

Strategic Plan – Shirley Antes
(items presented for information purposes only)
-Reviewed and discussed the strategic plan
-We will bring the Mission, Vision and Values to the next board meeting

Customized Training Revenue – Sheree Utash
(items presented for information purposes only)
-We have projected out to June 2010
-We are 79% delivered and Committed with Projected Revenue.
-The projection is $942,424 and our goal was 1.2M
-We confirmed with Learjet and they are comfortable with their projections
-Keep in mind we have not projected the virtual paint booth

High School Recruiting update – Sheree Utash
-We are continuing to work with and having a good response from USD 259, Circle, Andover and Derby in putting high school students in design, composites, aviation etc and either deliver here or at their high school
-There were some concerns about school district lines, but according to Bill Buchanan, County Manager as long as everyone agrees there should be no legal issues.

Oxygen/180 Skills – Sheree Utash/Trish Schmidt
-PowerPoint presentation was given to the Board

Website development – Sheree Utash
-PowerPoint presentation was given to the Board
-We will have a new color scheme and new crest
-We are using existing money
-Anticipate the new website to go live in May

President's Report	**President's Report** – Ray Frederick -Tuesday, February 23rd WATC will be hosting a luncheon/tour for City Council and some County Commissioners. Board members are welcomed, just let Paula Pitts know by Monday -Ray will be attending the TEA meeting next week -Keith Lawing, Workforce Alliance is working on TechEd in Topeka, KS on March 31, 2010. More information at a later date -Sheree Utash and Ray met with Doug Hensler at WSU regarding an articulation between our students and his program -We continue to meet with K-State of Saline and discuss a partnership -Ray suggested we have a special board meeting to discuss Cowley since several Board members want an update prior to our next Board meeting.
Consent Agenda	**BOT Meeting Minutes** The SCTETA meeting minutes for January 28, 2010 were provided to the Board electronically. The consent agenda item was considered and discussed; and thereupon on motion of Board Member Sharon Fearey, seconded by Board Member Cindy Hoover, the consent agenda items were approved. Motion carried: 8-0 with John Dieker and Scott Strode noted absent.
Adjournment	At approximately 4:50 p.m., the meeting adjourned.

Approved: _____

Lyndon Wells
Signature

Dated