AGENDA
Western Colorado Community College Curriculum Committee
October 11, 2011
BB-109 3:30pm

I. Health Sciences:
   Program Addition: AAS - Medical Office Assistant

II. Manufacturing and Industrial Science:
   Program Modification: AAS – Manufacturing Technology
                                       Welding Technology
   (program sheet change)

   Program Addition: AAS – Aviation Technology
                               Fixed-Wing

   Course Addition: AVTN 223 Multi-Engine Instructor Flight   1cr.

   Program Addition: AAS – Aviation Technology
                               Helicopter

   Course Additions: AVTN 108 GPS for Pilots   1cr.
                     AVTN 115 ATC Phraseology I   1cr.
                     AVTN 140 Aircraft Systems Pilots/Airframe   3cr.
                     AVTN 141 Aircraft Systems Pilots/Powerplant   3cr.
                     AVTN 242 ATC Phraseology II   3cr.

III. Update on Technical Certificate financial aid

IV. New Business

V. Adjourn

Western Colorado Community College

Proposal for New Associate of Applied Science Degree Program

A. <u>Name of program:</u> Medical Office Assistant Program

B. <u>Name of department proposing program:</u>   Western Colorado Community College / Health Sciences

C. <u>Name and contact information for person preparing forms:</u>

> Andrea Leak, RN, MHA
> 970-255-2630
> aleak@coloradomesa.edu

D. <u>Program goals as they pertain to Colorado Mesa University's goals and objectives and Colorado Mesa University's Role and Mission:</u>

The community colleges in Colorado that offer education and training to become a Medical Office Assistant provide both a certificate option and an Associate in Applied Science option. Both current certificate students and potential students have expressed a desire to attain their Associate of Applied Science in Medical Office Technology. The local medical office community consisting of medical office managers and physicians states it would be valuable for medical assistants to have an Associate of Applied Science.

1. The goals of the program:
   a. To prepare students for a career as a multi-skilled professional in the allied health field performing a range of clinical and administrative duties common to medical office practices.
   b. To fill a community need for well trained knowledgeable personnel to staff the offices of physicians, podiatrists, chiropractors and other health professionals.
   c. To provide accessible, affordable education and training for residents of Mesa, Delta, Montrose, San Miguel and Ouray Counties who are seeking employment in the expanding health care industry. To meet this goal, the program will be offered at both the Bishop Campus in Grand Junction and the Montrose Campus.

These goals support the University's Mission and Goals as outlined in the following excerpts:

From the University's Mission and Vision:
"Colorado Mesa University shall also maintain a community college role and mission, including vocational and technical programs." " In accomplishing its mission, the commission-approved (CDHE) service areas are: For its role as a community college - Mesa, Delta, Montrose, San Miguel, and Ouray Counties"

From the University's Strategic Plan

Programs Responding to Specific Workforce Needs:
Community and business leaders, in particular, indicated the need for the college to become more engaged in the region by developing/strengthening programs that support the Western Slope's economic drivers. The vocational/ technical programming of Colorado Mesa University, while effective, needs to be more robust. The college should review program opportunities for skilled positions at the sub-baccalaureate level…

Goal 1: To raise the level of educational attainment in the 14-county region by supporting students with diverse levels of academic preparation.
Measures: Increase the education standards of Western Colorado's citizens; growth in college enrollments; number of students who are first generation to college.

Goal 6: To more fully develop and implement the community college role of Colorado Mesa University.
Measures: Increase the number of students pursuing technical training certificates and associate degree programs; articulation of baccalaureate level admission to the college; expand learning support options for students with academic deficiencies.

E. Curriculum, including the identification of new courses and the numbers, names and sequencing of all courses
   a. The curriculum will consist of courses currently required to receive the Medical Office Assistant Certificate and courses required to receive the Associate of Applied Science degree.

Associate of Applied Science	Credits	Fall Sem	Spring Sem	Fall Sem	Spring Sem	Summer session
ENGL 111 English Composition	3	3				
ENGL 112 English Composition	3		3			
SPCH 101 Interpersonal Communication	3	3				
MATH 113 College Algebra or UTEC 107	4		4			
Social Sciences/Humanities Electives	6	3	3			
KINE 101 Health and Wellness	1		1			
KINE 100 – 191 Activity Course	1		1			
OFAD 147 Medical Terminology	4	4				
OFAD 118 Intro PC Applications	3			3		
MOAP 111 Intro Medical Assisting	3			3		
MOAP 133 Basic Medical Sciences I	4			4		
MOAP 136 Introduction to Clinical Skills	2			2		
OFAD 249 Medical Office Procedures	3				3	
MOAP 135 Basic Medical Sciences II	4				4	
MOAP 138 Medical Assisting Laboratory Skills	4				4	
MOAP 140 Medical Assisting Clinical Skills	4				4	
MOAP 150 Pharmacology for Medical Assists	3				3	
MOAP 183 Medical Assistant Internship (225 hours)	5					5
MOAP 189 Review for National Exam	1					1
Total credits	61	13	12	12	18	6

F. List of faculty and their qualification. (Is there a need for additional faculty?)
   a. Program director and faculty: Andrea Leak, RN,MHA
   b. Qualifications:
      i. Master of Health Administration
      ii. Over twenty five years in health care including supervising Medical Office Assistant
      iii. Teaching experience as instructor for Certified Nurse Aide training as well as a number of classes and seminars for health care organizations.

c. Will additional faculty be needed?
Currently full time faculty and part time instructors teach the courses for the technical certification. The anticipated number of students taking general education courses should be easily absorbed with no need for additional faculty.

G. Rationale and justification for the program demonstrating the demand

The impetus for this program came from the combined efforts of the Workforce Centers of Montrose and Mesa Counties, the University Department of Health Sciences and Western Colorado Community College. Based on this collaboration, Mesa County awarded Colorado Mesa University funding to start this program.

Medical assistants perform administrative and clinical tasks to keep the offices of physicians and other health practitioners running smoothly. Clinical duties include taking medical histories and vital signs, preparing patients for examinations, and assisting physicians during examinations and treatment procedures. Medical assistants collect and prepare laboratory specimens and perform basic laboratory test. As directed by a physician, they may prepare and administer medications, draw blood, take electrocardiograms, remove sutures and change dressings. Medical assistants prepare the examining room, order supplies, and keep patient areas neat and clean.

Administrative duties include updating patients' medical records, arranging for diagnostic tests and laboratory services, and completing insurance information. They also answer telephones, schedule appointments, greet patients and handle correspondence.

Significant points from U.S. Bureau of Labor Statistics:
- Employment is projected to grow much faster than average, ranking medical assistants among the fastest growing occupations over the 2008-2018 decade.
- Job prospects should be excellent.
- About 62 percent of medical assistant work in offices of physicians.
- Some medical assistants are trained on the job, but many complete 1-year or 2-year programs.

The only formal training currently provided in Mesa County is by one proprietary commercial school. There are no programs in Delta, Montrose, Ouray or San Miguel County. Credits from commercial schools do not transfer to the state supported institutions for higher education which may limit the graduate's ability to further one's education.

The certificate awarded by Western Colorado Community College provides basic entry into the occupation. The Associate of Applied Science will provide more employment opportunities and can be a step to continuing one's education.

The community medical office managers support the development of this program and want to be involved through advisement and participation as a site for internships. They look forward to having a labor pool of well trained knowledgeable medical assistants.

The Workforce Center case managers state they have many clients interested in entering the health care workforce and who would like training to become a medical assistant.

H. Professional, Technical or Other Programs (PTO) Justification

    a. Rationale for program to be in the PTO category: All Associate of Applied Science programs are considered PTO programs.

    b. Statement as to how the curriculum aligns to the requirements or recommendations of the nationally recognized accrediting, licensing, certifying or professional organization: The curriculum of this technical degree is aligned with the Commission on Accreditation of Allied Health Education Programs Standards and Guidelines for the Accreditation of Educational Programs in Medical Assisting. These standards have been adopted by the American Association of Medical Assistants and the American Medical Association. Additionally the curriculum prepares the student to take a Certification Examination offered by the American Medical Technologists, a national nonprofit certification agency. Successful applicants qualify for the Registered Medical Assistant, RMA (AMT) certification.

    c. Rationale for the program to exceed 60 credit hours, if applicable: The goal of the Medical Office Assistant Program (MOAP) courses is to provide consistency with the Medical Office Technology (MOT) courses offered through the Colorado Community College System. The total credits added up to 61 with both the general education requirements and the technical classes.

    d. Rationale for prescribing General Education courses, if applicable: <u>Not applicable</u>

    e. Rationale for prescribing Applied Studies courses, if applicable: <u>Not applicable</u>

    f. Explanation as to how a transfer student with an AA degree in the discipline of that program can graduate by completing only an additional 60 hours. <u>Not applicable</u>

I. Intended delivery mode for the program

    a. The classes are primarily provided in a classroom setting through lecture and lab.

    b. The summer session internship provides the student with an opportunity to practice both administrative skills and clinical skills in medical clinics. A cooperative education or internship requires a minimum of 45 hours of the job per each credit our registered.

    c. CDHE Contact/Credit Hour: Lecture 1 contact hour for 1 credit hour. Laboratory: Vocational/Technical (Lab V/T) 1.5 contact hour for 1 credit hour. Physical education: Recreational courses 2 contact hours for 1 credit hour

Courses	Instructional activity	Credits	Contact hours
ENGL 111 English Composition	Lecture	3	45
ENGL 112 English Composition	Lecture	3	45
SPCH 101 Interpersonal Communication	Lecture	3	45
MATH 113 College Algebra or UTEC 107	Lecture	4	60
Social Sciences/Humanities Electives	Lecture	6	90
KINE 101 Health and Wellness	Phys. ed.	1	30
KINE 100 – 191 Activity Course	Phys. ed.	1	60
OFAD 147 Medical Terminology	Lab V/T	4	90
OFAD 118 Intro PC Applications	Lab V/T	3	67.5
MOAP 111 Intro Medical Assisting	Lecture	3	45
MOAP 133 Basic Medical Sciences I	Lecture	4	60
MOAP 136 Introduction to Clinical Skills	Lab V/T	2	45
OFAD 249 Medical Office Procedures	Lab V/T	3	67.5
MOAP 135 Basic Medical Sciences II	Lecture	4	60
MOAP 138 Medical Assisting Laboratory Skills	Lab V/T	4	90
MOAP 140 Medical Assisting Clinical Skills	Lab V/T	4	90
MOAP 150 Pharmacology for Medical Assists	Lecture	3	45
MOAP 183 Medical Assistant Internship (225 hours)	45 hrs /credit	5	225
MOAP 189 Review for National Exam	Lecture	1	15
Totals		61	1275

J. Department's recommendation for additions to the Library's collection
    Text books and resource books related to medical assisting:
        Basic anatomy and physiology
        Medical assistant textbooks
        Medical terminology
        Coding books
        Drug handbooks
        Medical dictionaries
K. Enrollment Projections: refer to Table 1
L. Physical Capacity Estimates: refer to Table 2
M. Program Costs – Projected Expense and Revenue Estimates: refer to Table 3
N. Library analysis (prepared by Library): Course information sent to library
O. Program Sheet: separate Word document titled: AAS_1213-MOAP Program Sheet_ Proposed

DEPARTMENT WORKSHEET FOR PROGRAM CREATION, MODIFICATION, OR DELETION
Colorado Mesa University Curriculum Committees

NOTE: All related course changes must be submitted on separate forms.

DEPARTMENT NAME: **Western Colorado Community College**
          If new department, please enter name:

Proposal Type: **New Program**

PROGRAM: Degree type: **AAS**   Program/degree Name: **Medical Office Assisting**
                                          Concentration/Emphasis:

Effective Term: **Fall**   Effective Academic Year: **2012-13**

1. IS THIS A PROPOSAL TO <u>ADD</u> A NEW ACADEMIC PROGRAM? If yes:
    1. Discuss the proposal with all departments that might be affected by proposal.
    2. Prepare the support documentation in a MS Word file as indicated in the Curriculum Policies and Procedures Manual, Section IV. F. 3.
    3. Prepare a program sheet as an MS Word file (using prescribed format*).
    4. Submit documentation to Library's Curriculum Committee representative by published deadline.
    5. Obtain departmental approval according to department-specific procedures.
    6. Submit all information via web forms to Academic Affairs by the published deadline.

2. IS THIS A PROPOSAL TO <u>MODIFY</u> AN EXISTING ACADEMIC PROGRAM? If yes:
    1. If change to program name, enter new name:
       If change to the concentration/emphasis, enter:
    2. Is there a revision to the program sheet?
    3. Discuss the proposal with all departments that might be affected by proposal.
    4. Prepare the following support documentation in an MS Word file as indicated in the Curriculum Policies and Procedures Manual, Section IV. L. 2.
    5. Prepare a program sheet as a MS Word file (using prescribed format*).
    6. Obtain departmental approval according to department-specific procedures.
    7. Submit all information via web forms to Academic Affairs by the published deadline.

3. IS THIS A PROPOSAL TO <u>DELETE</u> AN EXISTING ACADEMIC PROGRAM? If yes:
    1. Discuss the proposal with all departments that might be affected by proposal.
    2. Prepare the following support documentation in an MS Word file as indicated in the Curriculum Policies and Procedures Manual, Section IV. K. 1.
    3. Obtain departmental approval according to department-specific procedures.
    4. Submit all information via web forms to Academic Affairs by the published deadline.

* Forms for enrollment projections, capacity estimates, and expense/revenue projections can be found on the Curriculum Committee's website. The most up-to-date program sheets are available as Word documents at R:\Curriculum\Program Sheets for Curriculum Program Modifications.

PROPOSED AND PREPARED BY:
Name: **Andrea Leak**   Date: **9/27/2011**

REVIEWED BY DEPARTMENT'S CURRICULUM COMMITTEE REPRESENTATIVE:
Name: Date:

APPROVED BY DEPARTMENT HEAD:
Name: Date:

Submit this form to Academic Affairs via email to <u>curriculum@coloradomesa.edu</u>.

TABLE 1: ENROLLMENT PROJECTIONS

Name of Program: Medical Office Assistant Program

Degree Title   Associate of Applied Science

Name of Institution: Western Colorado Community College of Colorado Mesa University

DEFINITIONS:

Academic year is the period beginning July 1 and concluding June 30.

Headcount projections represent an unduplicated count of those students officially admitted to the program and enrolled at the institution during the academic year.

FTE is defined as the full-time equivalent number of those students majoring in the program, regardless of the classes enrolled, during the academic year.

Program graduate is defined as a student who finishes all academic program requirements and graduates with a formal award within a particular academic year.

SPECIAL NOTES:

To calculate the annual headcount enrollment, add new enrollees to the previous year headcount and subtract the number who graduated in the preceding year. Adjust by the anticipated attrition rate.

To calculate FTE, multiply the number of students times the projected number of credit hours degree seeking students will be typically enrolled in per year and divide by 30.

The data in each column is the annual **unduplicated** number of declared program majors. Since this table documents program demand, course enrollments are not relevant and shall not be included in the headcount or FTE data.

		Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Full Implementation
1-a	In-state Headcount	29	55	61	56	58	58
1-b	Out-of-State Headcount	1	2	3	2	2	2
2	Program Headcount	30	57	63	58	60	60
3-a	In-state FTE	29	49	53	50	52	52
3-b	Out-of-State FTE	1	2	3	2	2	2
4	Program FTE	30	51	56	52	54	54
5	Program Graduates	0	24	28	26	27	27

_____   _____
Signature of Governing Board Officer   Date

TABLE 2: PHYSICAL CAPACITY ESTIMATES

Name of Program: <u>Medical Office Assistant Program</u>

Name of Institution: <u>Western Colorado Community College of Colorado Mesa University</u>

Purpose: This table documents the physical capacity of the institution to offer the program and/or the plan for achieving the capacity. Complete A or B.

Part A

I certify that this proposed degree program can be fully implemented and accommodate the enrollment projections provided in this proposal without requiring additional space or renovating existing space during the first five years.

_____   _____
Governing Board Capital Construction Officer   Date

Part B

	Column 1	Column 2	Column 3		Column 4		Column 5	Column 6
ASSIGNABLE SQUARE FEET	TOTAL NEEDED	AVAILABLE	RENOVATION		NEW CONSTRUCTION		LEASE/ RENT	REVENUE SOURCE*
TYPE OF SPACE			Immed	Future	Immed	Future		
Classroom	1	yes						
Instructional Lab	1	yes						
Offices								
Study								
Special/General Use								
Other								
TOTAL	2	yes						

* Capital Construction Fund (CCF), Research Building Revolving Fund (RBRF), Gift (GIFT), Grant (GR), Auxiliary Fund (AUX)

Attach a narrative describing the institutional contingency plan that addresses the space requirements of the proposed program or alternative delivery options, in the event that the request for capital construction or renovation is not approved.

_____   _____
Governing Board Capital Construction Officer   Date

Approved Policy   I-B-10   June 5, 2003

TABLE 3 – PROJECTED EXPENSE AND REVENUE ESTIMATES

All cost and revenue projections should be in constant dollars (do not include an inflation factor).

		ESTIMATED AMOUNT IN DOLLARS (PV)				
		Year 1	Year 2	Year 3	Year 4	Year 5
Operating Expenses:						
1	Faculty	111,403	121,539	124,106	124,416	125,887
2	Financial Aid specific to program					
3	Instructional Materials					
4	Program Administration					
5	Rent/Lease					
6	Other Operating Costs	5,695	7,895	7,895	6,895	6,895
7	Total Operating Expenses					
Program Start-Up Expenses						
8	Capital Construction					
9	Equipment Acquisitions					
10	Library Acquisitions					
11	Total Program Start-Up Exp.					
TOTAL PROGRAM EXPENSES		117,098	129,434	132,001	131,311	132,782
Enrollment Revenue						
12	General Fund: State Support	55,800	94,860	104,160	96,720	100,440
13	Cash Revenue: Tuition	196,443	333,953	366,694	340,501	353,597
14	Cash Revenue: Fees					
Other Revenue						
15	Federal Grants					
16	Corporate Grants/Donations	75735	0	0	0	0
17	Other fund sources *					
18	Institutional Reallocation **					
TOTAL PROGRAM REVENUE		351,027	467,996	513,878	477,173	495,526

** If revenues are projected in this line, please attach an explanation of the specific source of the funds. If reallocated, the specific departments and the impact the dollars will have on the departments that will provide the reallocated dollars.

_____   _____   _____

Signature of Governing Board Financial Officer   Title   Date

2012-2013 PETITION/PROGRAM SHEET
Degree: Associate of Applied Science
Major: Medical Office Assisting
Emphasis:

About This Emphasis . . .

This program prepares individuals to perform routine clinical and administrative functions in health care facilities, primarily medical clinics or physician's offices. Students successfully completing this program will be able to perform the administrative tasks of a medical receptionist and work in the clinical areas by providing assistance with physical examinations, diagnostic tests and treatment procedures.

All students successfully completing the program are eligible to take the national certification examination offered by the American Medical Technologists, a national certifying agency, to become a Registered Medical Assistant.

POLICIES:
1. It is your responsibility to determine whether you have met the requirements for your degree. Please see the catalog for a complete list of graduation requirements.
2. You must turn in your "Intent to Graduate" form to the Registrar's Office **by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December**.
3. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.**
4. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the WCCC Director for signature.
5. Finally, the WCCC Director or the department administrative assistant will take the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
6. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
7. NOTE: The semester before graduation, you may be required to take a Major Field Achievement Test (exit exam).

NAME: _____   **STUDENT ID #** _____

LOCAL ADDRESS AND PHONE NUMBER: _____

_____ **(   )** _____

I, (Signature)_____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

_____   _____20_____
Signature of Advisor   Date

_____   _____20_____
Signature of WCCC Director   Date

_____   _____20_____
Signature of Registrar   Date

Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration.

Degree Requirements:
- 2.00 cumulative GPA or higher in all CMU coursework
- A grade of "C" or higher must be achieved in achieved in coursework toward major content area.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- Program sheets are for advising purposes only. Because a program may have requirements specific to the degree, check with your advisor for additional guidelines, including prerequisites, grade point averages, grades, exit examinations, and other expectations. It is the student's responsibility to be aware of, and follow, all guidelines for the degree being pursued. Any exceptions or substitutions must be approved by the faculty advisor and/or Department Head. Courses related to teacher licensure must also be approved by the Teacher Education Dept.
- When filling out the program sheet a course can be used only once.
- See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information.

GENERAL EDUCATION REQUIREMENTS (18 semester hours)
See the current catalog for a list of courses that fulfill the requirements below. If a course is on the general education list of options and a requirement for your major, you must use it to fulfill the major requirement and make a different selection within the general education requirement.

Course No	Title	Sem.hrs	Grade	Term

English (6 semester hours)
ENGL 111	English Composition	3		
ENGL 112	English Composition	3		

Math: MATH 113 or UTEC 107 (4 semester hours)
MATH 1___	_____	4		

Social and Behavioral Sciences, Humanities or Applied Studies Courses (6 semester hours)
Course No	Title	Sem.hrs	Grade	Term
_____ ____	_____	3		
_____ ____	_____	3		

Kinesiology (2 semester hours)
KINE 100	Health and Wellness	1		
KINA 1____	_____	1		

Applied Studies
SPCH 101	Interpersonal Communication	3		

ASSOCIATE OF APPLIED SCIENCE: COURSE REQUIREMENTS
(40 semester hours)

Course No	Title	Sem Hrs	Grade	Term
OFAD 118	Intro PC Applications	3		
OFAD 147	Medical Terminology	4		
OFAD 249	Medical Office Procedures	3		
MOAP 111	Intro Medical Assisting	3		
MOAP 133	Basic Medical Science I	4		
MOAP 135	Basic Medical Science II	4		
MOAP 136	Intro to Clinical Skills	2		
MOAP 138	Med Assist Lab Skills	4		
MOAP 140	Med Assist Clinical Skills	4		
MOAP 150	Pharmacology for Med Assist	3		
MOAP 183	Medical Assist Internship	5		
MOAP 189	Review for National Exam	1		

Electives (X semester hours) _____ ____

		_____	____		_____
____	___	_____	____	___	_____
____	___	_____	____	___	_____
____	___	_____	____	___	_____
____	___	_____	____	___	_____
____	___	_____	____	___	_____

SUGGESTED COURSE SEQUENCING FOR A MAJOR IN MEDICAL OFFICE ASSISTING

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Colorado Mesa website for course availability.

FRESHMAN YEAR

Fall Semester	Hours	Spring Semester	Hours
ENGL 111 English Composition	3	ENGL 112 English Composition	3
SPCH 101 Interpersonal Communication	3	MATH 113 or UTEC 107	4
Social Sciences / Humanities Electives	3	Social Sciences/Humanities Electives	3
OFAD 147 Medical Terminology	4	KINE 100 Health and Wellness	1
	13	KINE 1__	1
			12

SOPHOMORE YEAR

Fall Semester	Hours	Spring Semester	Hours
OFAD 118 Introduction to PC Applications	3	OFAD 249 Medical Office Procedures	3
MOAP 111 Introduction to Medical Assisting	3	MOAP 133 Basic Medical Sciences 2	4
MOAP 133 Basic Medical Sciences 1	4	MOAP 138 Medical Office Assisting Laboratory Skills	4
MOAP 136 Introduction to Clinical Skills	2	MOAP 140 Medical Assisting Clinical Skills	4
	12	MOAP 150 Pharmacology for Medical Assistants	3
			18

Summer Session	Hours
MOAP 183 Medical Assistant Internship	5
MOAP 189 Review for National Exam	1
	6

DEPARTMENT WORKSHEET FOR PROGRAM CREATION, MODIFICATION, OR DELETION
Colorado Mesa University Curriculum Committees

NOTE: All related course changes must be submitted on separate forms.

DEPARTMENT NAME: **Western Colorado Community College**
        If new department, please enter name:

Proposal Type: **Program Modification**

PROGRAM: Degree type: **AAS**   Program/degree Name: **Manufacturing Technology**
                            Concentration/Emphasis: **Welding Technology**

Effective Term: **Spring**   Effective Academic Year: **2012-13**

1. IS THIS A PROPOSAL TO <u>ADD</u> A NEW ACADEMIC PROGRAM? If yes:
   1. Discuss the proposal with all departments that might be affected by proposal.
   2. Prepare the support documentation in a MS Word file as indicated in the Curriculum Policies and Procedures Manual, Section IV. F. 3.
   3. Prepare a program sheet as an MS Word file (using prescribed format*).
   4. Submit documentation to Library's Curriculum Committee representative by published deadline.
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   6. Submit all information via web forms to Academic Affairs by the published deadline.

2. IS THIS A PROPOSAL TO <u>MODIFY</u> AN EXISTING ACADEMIC PROGRAM? If yes:
   1. If change to program name, enter new name:
      If change to the concentration/emphasis, enter:
   2. Is there a revision to the program sheet? **Yes**
   3. Discuss the proposal with all departments that might be affected by proposal.
   4. Prepare the following support documentation in an MS Word file as indicated in the Curriculum Policies and Procedures Manual, Section IV. L. 2.
   5. Prepare a program sheet as a MS Word file (using prescribed format*).
   6. Obtain departmental approval according to department-specific procedures.
   7. Submit all information via web forms to Academic Affairs by the published deadline.

3. IS THIS A PROPOSAL TO <u>DELETE</u> AN EXISTING ACADEMIC PROGRAM? If yes:
   1. Discuss the proposal with all departments that might be affected by proposal.
   2. Prepare the following support documentation in an MS Word file as indicated in the Curriculum Policies and Procedures Manual, Section IV. K. 1.
   3. Obtain departmental approval according to department-specific procedures.
   4. Submit all information via web forms to Academic Affairs by the published deadline.

* Forms for enrollment projections, capacity estimates, and expense/revenue projections can be found on the Curriculum Committee's website. The most up-to-date program sheets are available as Word documents at R:\Curriculum\Program Sheets for Curriculum Program Modifications.

PROPOSED AND PREPARED BY:
Name: **Jason Sinclair**   Date: **09/08/2011**

REVIEWED BY DEPARTMENT'S CURRICULUM COMMITTEE REPRESENTATIVE:
Name: **Gary Looft**   Date: **09/08/2011**

APPROVED BY DEPARTMENT HEAD:
Name: **William J. McCracken Jr.**   Date: **09/08/2011**

Submit this form to Academic Affairs via email to <u>curriculum@coloradomesa.edu</u>.

Manufacturing & Industrial Services Department
09/08/2011
Clean-up of Welding AAS program changes 2011

Justification

Two courses for the Associate of Applied Science (AAS)- Manufacturing Technology- Welding Technology had been inadvertently deleted and need to be added. MAMT 101 Introduction to Manufacturing and MAMT 115 Introduction to Machine Shop are to be reinstated to the Associate of Applied Science (AAS)- Manufacturing Technology- Welding Technology degree.

MAMT 260 was a typo and should be MAMT 160.

One of the two, non-program specific, Elective courses will be deleted because it is not required for the Associate of Applied Science (AAS)- Manufacturing Technology- Welding Technology degree.

2011-2012 2012-2013 PETITION/PROGRAM SHEET
Degree: Associate of Applied Science
Major: Manufacturing Technology
Emphasis: Welding Technology
www.mesastate.edu/academics/programs.html
Program: www.mesastate.edu/wccc.html

About This Emphasis . . .

The Associate of Applied Science degree with a major in Manufacturing Technology and an emphasis in Welding Technology Degree program is designed to provide the training and opportunity to become proficient at SMAW, GWAW, GTAW, FCAW, OAW, OAC, PAC, CAC-A on plate and SMAW on pipe. Students study welding, cutting, layout, fabrication, fluid power, pneumatics, and technical math. Safety, attitude and quality of workmanship are stressed throughout this program course. The welding AAS degree emphasis prepares students for advanced level placement in a wide range of jobs in the welding industry and is designed to meet competency based standards set by the American Welding Society. Employment opportunities for qualified welders include positions in the oil and gas industries, healthcare, food service, and the automotive industry. Graduates may also find positions as industrial or ornamental welders and will be qualified for worldwide manufacturing job opportunities.

POLICIES:
1. It is your responsibility to determine whether you have met the requirements for your degree. Please see the MSC Catalog for a complete list of graduation requirements.
2. You must turn in your "Intent to Graduate" form to the Registrar's Office **by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December**.
3. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.**
4. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the WCCC Director of Instruction for signature.
5. Finally, the WCCC Director or the department administrative assistant will take the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
6. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
7. NOTE: The semester before graduation, you may be required to take a Major Field Achievement Test (exit exam).

NAME:_____   **STUDENT ID #**_____

LOCAL ADDRESS AND PHONE NUMBER:_____

_____ **(   )** _____

I, (Signature)_____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

_____20_____
Signature of Advisor   Date

_____20_____
Signature of WCCC Director   Date

_____20_____
Signature of Registrar   Date

Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration.

Degree Requirements:
- 60 semester hours total (A minimum of 16 taken at MSC in no fewer than two semesters)
- 2.00 cumulative GPA or higher in all MSC coursework and a "C" or better must be achieved in coursework toward major content area.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- A student must follow the MSC graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.
- When filling out the program sheet a course can be used only once.
- See the "Undergraduate Graduation Requirements" in the Mesa State College catalog for additional graduation information.

GENERAL EDUCATION REQUIREMENTS (18 semester hours)
See the current Mesa State College catalog for a list of courses that fulfill the requirements below. If a course is on the general education list of options and a requirement for your major, <u>you must use it to fulfill the major requirement</u> and make a different selection within the general education requirement.

Course No	Title	Sem.hrs	Grade	Term/Trns

English (6 semester hours)
ENGL 111	English Composition	3	_____	_____
ENGL 112	English Composition	3	_____	_____

Math: MATH 113 or UTEC 107 (4 semester hours)
_____ ____ _____		4	_____	_____

Social and Behavioral Science, Humanities or Selected Speech Courses (6 semester hours)
_____ ____ _____		3	_____	_____
_____ ____ _____		3	_____	_____

Kinesiology (2 semester hours)
KINE 100	Health and Wellness	1	_____	_____

KINA 1____	_____	1	_____	_____
Course No	Title	Sem.hrs	Grade	Term/Trns

ASSOCIATE OF APPLIED SCIENCE: MANUFACTURING TECHNOLOGY – WELDING TECHNOLOGY COURSE REQUIREMENTS
(39 semester hours)

Core Classes
Course	Title	Hrs	Grade	Term/Trns
CADT101	Introduction to Computers	1	_____	_____
CADT108	Computer Aided Design	3	_____	_____
MAMT105	Print Reading/Sketching	2	_____	_____
MAMT150	Intro to Numerical Control	1	_____	_____
MAMT260	Properties of Materials	2	_____	_____
TSTG 150	Fluid Power	3	_____	_____
TSTG 220	Industry Employment Practices	3	_____	_____
OR				
120	Industrial Safety Practices	3	_____	_____
WELD110	Shielded Metal Arc Welding	3	_____	_____
WELD117	Oxy/Fuel & Plasma Cutting	3	_____	_____
WELD133	Metal Fabrication Methods	3	_____	_____
WELD~~145~~144	Welding Business Operations	3	_____	_____
WELD211	GMAW/FCAW	3	_____	_____
WELD230	Gas Tungsten Arc Welding	3	_____	_____
WELD 240	PIPE Welding	3	_____	_____
WELD 270	Practical Applications	3	_____	_____

Electives: (6 semester hours)
_____ ___ _____		____	_____	_____
_____ ___ _____		____	_____	_____

<u>TOTAL :</u> 63 Semester Hours

Students in Welding may be required to purchase approximately $500.00 in tools and personal safety welding equipment. This does not include required textbooks. These costs may vary with student need and brand or quality of tools or equipment purchased. All safety glasses must meet the minimum industry safety standard of Z-87 with side shields. MSC / WCCC has lockers with required tools available for rent at $ 50.00 per semester.

SUGGESTED COURSE SEQUENCING FOR THE ASSOCIATE OF APPLIED SCIENCE WITH A MAJOR IN MANUFACTURING TECHNOLOGY – EMPHASIS IN WELDING TECHNOLOGY

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Mesa State website for course availability.

First Semester		**Hours**
CADT101	Introduction to Computers1	
MAMT 105	PrintReading/Sketching2	
WELD 110	Shielded Metal Arc Welding	3
WELD 117	Oxy/Fuel and Plasma Arc Cutting3	
WELD 133	Metal Fabrication Methods	3
WELD 145	Welding Business Operations	3
		15

Second Semester		**Hours**
CADT 108	Computer Aided Design- Mechanical	3
MAMT 260	Properties of Materials	2
UTEC 107	Math for Technology **OR**	
	MATH 113 College Algebra	4
WELD 211	GMAW/FCAW	3
WELD 230	Gas Tungsten Arc Welding	3
WELD 240	PIPE Welding	3
		18

Third Semester		**Hours**
ENGL 111	English Composition	3
KINE 100	Health and Wellness	1
KINA 1xx	Activity	1
MAMT 150	Introduction to Numerical Control	1
TSTG150	Fluid Power	3
General Education Soc/Beh Sci., Humanities, Speech		3
Electives		3
15		

Fourth Semester		**Hours**
ENGL 112	English Composition	3
TSTG 220	Industry Employment Practices **OR**	
TSTG120	Industrial Safety Practice 3	
WELD 270	Practical Applications	3
General Education Soc/Beh Sci., Humanities, Speech		3
Electives		3
15		
		63

20112012 **2012**2013 PETITION/PROGRAM SHEET
Degree: Associate of Applied Science
Major: Manufacturing Technology
Emphasis: Welding Technology

About This Emphasis . . .

The Welding Technology Degree program is designed to provide training and the opportunity to become proficient at SMAW, GWAW, GTAW, FCAW, OAW, OAC, PAC, CAC-A on plate and SMAW on pipe. Students study welding, cutting, layout, fabrication, fluid power, pneumatics and technical math. Safety, attitude and quality of workmanship are stressed throughout this course. The welding AAS degree prepares students for advanced level placement in a wide range of jobs in the welding industry and is designed to meet competency based standards set by the American Welding Society.

POLICIES:
1. It is your responsibility to determine whether you have met the requirements for your degree. Please see the catalog for a complete list of graduation requirements.
2. You must turn in your "Intent to Graduate" form to the Registrar's Office **by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December.**
3. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.**
4. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the WCCC Director of Instruction for signature.
5. Finally, the WCCC Director or the department administrative assistant will take the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
6. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
7. NOTE: The semester before graduation, you may be required to take a Major Field Achievement Test (exit exam).

NAME:_____ **STUDENT ID #**_____

LOCAL ADDRESS AND PHONE NUMBER:_____

_____ **(   )** _____

I, (Signature)_____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

_____20_____
Signature of Advisor   Date

_____20_____
Signature of WCCC Director   Date

_____20_____
Signature of Registrar   Date

Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration.

Degree Requirements:
- 2.00 cumulative GPA or higher in all CMU coursework and a "C" or better must be achieved in coursework toward major content area.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.
- See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information.

GENERAL EDUCATION REQUIREMENTS (18 semester hours)
See the current catalog for a list of courses that fulfill the requirements below. If a course is on the general education list of options and a requirement for your major, you must use it to fulfill the major requirement and make a different selection within the general education requirement.

Course No Title   Sem.hrs Grade Term/Trns

English (6 semester hours)
ENGL 111 English Composition   3   _____ _____
ENGL 112 English Composition   3   _____ _____

Math: MATH 113 or UTEC 107 (4 semester hours)
_____ ____ _____ 4   _____ _____

Social and Behavioral Science, Humanities or Selected Speech Courses (6 semester hours)
_____ ____ _____ 3   _____ _____
_____ ____ _____ 3   _____ _____

Kinesiology (2 semester hours)
KINE 100   Health and Wellness   1   _____ _____
KINA 1____ _____   1   _____ _____

Course No Title   Sem.hrs Grade Term/Trns

ASSOCIATE OF APPLIED SCIENCE: MANUFACTURING TECHNOLOGY – WELDING TECHNOLOGY COURSE REQUIREMENTS
(~~39~~44 semester hours)

Core Classes

Course	Title	Hrs		
CADT101	Introduction to Computers	1	_____	_____
CADT108	Computer Aided Design	3	_____	_____
MAMT105	Print Reading/Sketching	2	_____	_____
MAMT101	Intro to Manufacturing	2	_____	_____
MAMT115	Intro to Machine Shop	3	_____	_____
MAMT150	Intro to Numerical Control	1	_____	_____
~~MAMT260~~ MAMT160	Properties of Materials 2		_____	
TSTG 150	Fluid Power	3	_____	_____
TSTG 220	Industry Employment Practices	3	_____	_____
OR				
TSTG 120	Industrial Safety Practices	3	_____	_____
WELD110	Shielded Metal Arc Welding	3	_____	_____
WELD117	Oxy/Fuel & Plasma Cutting	3	_____	_____
WELD133	Metal Fabrication Methods	3	_____	_____
WELD144	Welding Business Operations	3	_____	_____
WELD211	GMAW/FCAW	3	_____	_____
WELD230	Gas Tungsten Arc Welding	3	_____	_____
WELD 240	PIPE Welding 3		_____	
WELD 270	Practical Applications 3	_____	_____	

Electives: (~~6~~ 3 semester hours)
_____ ____ _____ ____ ____ _____
_____ ____ _____ ____ ____ _____

TOTAL : ~~63~~ 65 Semester Hours

Students in Welding may be required to purchase approximately $500.00 in tools and personal safety welding equipment. This does not include required textbooks. These costs may vary with student need and brand or quality of tools or equipment purchased. All safety glasses must meet the minimum industry safety standard of Z-87 with side shields. CMU / WCCC has lockers with required tools available for rent at $ 50.00 per semester.

SUGGESTED COURSE SEQUENCING FOR THE ASSOCIATE OF APPLIED SCIENCE WITH A MAJOR IN MANUFACTURING TECHNOLOGY – EMPHASIS IN WELDING TECHNOLOGY

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Colorado Mesa website for course availability.

First Semester		Hours
CADT101	Introduction to Computers	1
MAMT 101	Intro to Manufacturing	2
MAMT 105	PrintReading/Sketching	2
WELD 110	Shielded Metal Arc Welding	3
WELD 117	Oxy/Fuel and Plasma Arc Cutting	3
WELD 133	Metal Fabrication Methods	3
WELD 144	WeldingBusinessOperations	3
		1517

Second Semester		Hours
CADT 108	Computer Aided Design- Mechanical	3
MAMT 260	Properties of Materials	2
UTEC 107	Math for Technology **OR**	
	MATH 113 College Algebra	4
WELD 211	GMAW/FCAW	3
WELD 230	Gas TungstenArcWelding	3
WELD 240	PIPE Welding	3
		1818

Third Semester		Hours
ENGL 111	English Composition	3
KINE 100	Health and Wellness	1
KINA 1xx	Activity	1
MAMT 115	Intro to Machine Shop	3
MAMT 150	Introduction to Numerical Control	1
TSTG150	Fluid Power	3
General Education Soc/Beh Sci., Humanities, Speech		3
Electives		3
	15	

Fourth Semester		Hours
ENGL 112	English Composition	3
TSTG 220	Industry Employment Practices**OR**	
TSTG120	Industrial Safety Practice	3
WELD 270	Practical Applications	3
General Education Soc/Beh Sci., Humanities, Speech		3
Electives		3
	15	

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6365

DEPARTMENT WORKSHEET FOR PROGRAM CREATION, MODIFICATION, OR DELETION
Colorado Mesa University Curriculum Committees

NOTE: All related course changes must be submitted on separate forms.

DEPARTMENT NAME: **Western Colorado Community College**
            If new department, please enter name:

Proposal Type: **New Program**

PROGRAM: Degree type: **AAS**   Program/degree Name: **Aviation Technology**
                                        Concentration/Emphasis: **Fixed-wing**

Effective Term: **Fall**   Effective Academic Year: **2012-13**

1. IS THIS A PROPOSAL TO <u>ADD</u> A NEW ACADEMIC PROGRAM? If yes:
   1. Discuss the proposal with all departments that might be affected by proposal.
   2. Prepare the support documentation in a MS Word file as indicated in the Curriculum Policies and Procedures Manual, Section IV. F. 3.
   3. Prepare a program sheet as an MS Word file (using prescribed format*).
   4. Submit documentation to Library's Curriculum Committee representative by published deadline.
   5. Obtain departmental approval according to department-specific procedures.
   6. Submit all information via web forms to Academic Affairs by the published deadline.

2. IS THIS A PROPOSAL TO <u>MODIFY</u> AN EXISTING ACADEMIC PROGRAM? If yes:
   1. If change to program name, enter new name:
      If change to the concentration/emphasis, enter:
   2. Is there a revision to the program sheet?
   3. Discuss the proposal with all departments that might be affected by proposal.
   4. Prepare the following support documentation in an MS Word file as indicated in the Curriculum Policies and Procedures Manual, Section IV. L. 2.
   5. Prepare a program sheet as a MS Word file (using prescribed format*).
   6. Obtain departmental approval according to department-specific procedures.
   7. Submit all information via web forms to Academic Affairs by the published deadline.

3. IS THIS A PROPOSAL TO <u>DELETE</u> AN EXISTING ACADEMIC PROGRAM? If yes:
   1. Discuss the proposal with all departments that might be affected by proposal.
   2. Prepare the following support documentation in an MS Word file as indicated in the Curriculum Policies and Procedures Manual, Section IV. K. 1.
   3. Obtain departmental approval according to department-specific procedures.
   4. Submit all information via web forms to Academic Affairs by the published deadline.

* Forms for enrollment projections, capacity estimates, and expense/revenue projections can be found on the Curriculum Committee's website. The most up-to-date program sheets are available as Word documents at R:\Curriculum\Program Sheets for Curriculum Program Modifications.

PROPOSED AND PREPARED BY:
Name: **William J. McCracken Jr.**   Date: **9/22/2011**

REVIEWED BY DEPARTMENT'S CURRICULUM COMMITTEE REPRESENTATIVE:
Name: **Gary Looft**   Date: **9/22/2011**

APPROVED BY DEPARTMENT HEAD:
Name: **Brigitte Sundermann**   Date: **9/22/2011**

Submit this form to Academic Affairs via email to <u>curriculum@coloradomesa.edu</u>.

Justification for Aviation Helicopter Program

According to the FAA, the aviation industry is expected to more than double during the next twenty years, therefore there will be and is an increasing demand for helicopter pilots. There are many career opportunities for the professional helicopter pilot. Graduates have a wide variety of choices in the industry as companies are continually searching for qualified pilots. Below is a list of several opportunities for a career as a professional helicopter pilot.

- o Helicopter Flight Instruction
- o Air Medical Transport
- o Aerial Photography
- o Agricultural Spraying
- o Executive Charter
- o Scientific Study and Research
- o Law Enforcement
- o Sightseeing Tours
- o Media - TV and Radio News
- o Survey and Mapping

- o Forestry
- o Skydiving
- o Heli- Skiing
- o Movie Production
- o Heavy Lift
- o Search and Rescue
- o Offshore Oil Support
- o Pipeline and Power Line Patrol
- o Fire Fighting
- o Military

The [FAA-Industry Training Standards (FITS)](#) program is a partnership between FAA, industry, and academia designed to enhance general aviation safety. This is accomplished by developing flight training programs that are more convenient, more accessible, less expensive, and more relevant to today's users of the National Airspace System. The FITS program creates scenario-based, learner-focused training materials that encourage practical application of knowledge and skills. The goal is to help pilots of technically-advanced aircraft (TAAs) -- which have more automation and often greater performance capability -- develop the risk management skills and in-depth systems knowledge needed to safely operate and maximize the capability of these aircraft in the National Airspace System (NAS).

The Fixed-wing and Helicopter Programs developed for Western Colorado Community College incorporate all courses that are currently approved through the Colorado Community College System and reflect current programs that are offered across Colorado and the United States.

A. <u>Name of Program</u>: Aviation Technology
   <u>Degree</u>: Associate of Applied Science
   <u>Emphasis</u>: Fixed-wing

B. <u>Department Proposing Program</u>: Western Colorado Community College

C. <u>Contact Information</u>:
   William J. McCracken Jr.
   Assistant Technical Professor
   Department Head – Manufacturing and Industrial Services Department
   2508 Blichmann Ave.
   Grand Junction, CO 81506
   (970)248-1666
   wimccrac@mesastate .edu

   Bradley Sullivan
   Colorado Flight Center
   800 Heritage Way
   Grand Junction CO 81506
   Phone: 970.254.0444 FAX: 970.254.0445
   Website: www.ColoradoFlightCenter.com

D. <u>Program Goals</u>:
   - Provide technical certification for college credit as identified in Mesa State College's mission established by the Colorado Legislature, as contained in Colorado Revised Statutes (C.R.S.) 23-53-101: "Mesa State College shall also maintain a community college role and mission, including vocational and technical programs. For its role as a community college - Mesa, Delta, Montrose, San Miguel, and Ouray Counties. (The College cooperates with Adams State College in providing two-year programs for Gunnison and Hinsdale Counties.)"
   - Prepare students for FAA certification.
   - Offer opportunities to enhance knowledge and expertise through education.
   - Enhance technical skills that make our students more marketable.
   - Provide students the current pedagogy in Aviation Technology.
   - Prepare Aviation Technology Technical AAS students for BS programs in Aviation Technology.

E. <u>New Course Identification</u>:
   - AVTN 223- Multi-engine Instructor Flight- 1 Credit Hour

All courses listed are approved with the State of Colorado under AVT prefix Colorado Community College System (CCCS) www.cccs.com

F. Faculty Qualifications:
Bradley Sullivan, Phone: 970.254.0444 FAX: 970.254.0445
 Website: www.ColoradoFlightCenter.com

Bradley, a Colorado native, learned to fly in the high deserts of southern Utah. After flying recreationally for a year, he attended Pinnacle Aviation Academy in San Diego California, where he earned his advanced ratings and certificates. He moved to Grand Junction in 2001, and has been actively involved with the local aviation community ever since. Bradley has logged over 3500 hours of dual instruction and is a certified FAA instructor.

G. Statement:

Most regional airlines require pilot candidates to have an Associate's Degree and most major airlines require their pilots to have a Bachelor's Degree. One of the best ways for students to fulfill their degree requirements is to combine their flight training with one of our on-line or campus educational programs. Graduate's employment opportunities include aviation careers in corporate, airline and general aviation.

H. Rationale:

The FAA-Industry Training Standards (FITS) program is a partnership between FAA, Industry, and Academia designed to enhance general aviation safety. This is accomplished by developing flight training programs that are more convenient, more accessible, less expensive, and more relevant to today's users of the National Airspace System. The FITS program creates scenario-based, learner-focused training materials that encourage practical application of knowledge and skills. The goal is to help pilots of technically-advanced aircraft (TAAs) -- which have more automation and often greater performance capability -- develop the risk management skills and in-depth systems knowledge needed to safely operate and maximize the capability of these aircraft in the National Airspace System (NAS).

Colorado Flight Center instructors have been specifically trained by both Cessna Aircraft Company and Cirrus Design Corporation to the FITS standards for their TAA aircraft. Colorado Flight Center instructors are certified by both Cirrus and Cessna to provide the latest in training methodology for these advanced aircraft types.

I. <u>Delivery Mode</u>:

The courses within the Aviation Technology Associate of Applied Science Program will consist of the following delivery:

- Lecture

- Computer-based instruction

- On-line instruction

- Laboratory hands-on flight instruction

J. <u>Department Recommendation for Library Collection</u>:

Please refer to the Library Assessment Form

K. TABLE 1: ENROLLMENT PROJECTIONS

Name of Program: <u>Aviation Technology – Fixed-wing</u>

Degree Title   <u>Associate of Applied Science</u>

Name of Institution: <u>Western Colorado Community College</u>

DEFINITIONS:

    Academic year is the period beginning July 1 and concluding June 30.

    Headcount projections represent an unduplicated count of those students officially admitted to the program and enrolled at the institution during the academic year.

    FTE is defined as the full-time equivalent number of those students majoring in the program, regardless of the classes enrolled, during the academic year.

    Program graduate is defined as a student who finishes all academic program requirements and graduates with a formal award within a particular academic year.

SPECIAL NOTES:

    To calculate the annual headcount enrollment, add new enrollees to the previous year headcount and subtract the number who graduated in the preceding year. Adjust by the anticipated attrition rate.

    To calculate FTE, multiply the number of students times the projected number of credit hours degree seeking students will be typically enrolled in per year and divide by 30.

    The data in each column is the annual **unduplicated** number of declared program majors. Since this table documents program demand, course enrollments are not relevant and shall not be included in the headcount or FTE data.

		Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Full Implementation
1-a	In-state Headcount	9	12	15	18	21	
1-b	Out-of-State Headcount	1	1	2	2	3	
2	Program Headcount	10	13	17	20	24	
3-a	In-state FTE						
3-b	Out-of-State FTE						
4	Program FTE						
5	Program Graduates	10	13	17	20	24	

_____   _____
Signature of Governing Board Officer   Date

L. TABLE 2: PHYSICAL CAPACITY ESTIMATES

Name of Program: Aviation Technology – Fixed-wing

Name of Institution: Western Colorado Community College

Purpose: This table documents the physical capacity of the institution to offer the program and/or the plan for achieving the capacity. Complete A or B.

Part A

I certify that this proposed degree program can be fully implemented and accommodate the enrollment projections provided in this proposal without requiring additional space or renovating existing space during the first five years.

_____   _____
Governing Board Capital Construction Officer   Date

Part B

ASSIGNABLE SQUARE FEET	Column 1 TOTAL NEEDED	Column 2 AVAILABLE	Column 3 RENOVATION		Column 4 NEW CONSTRUCTION		Column 5 LEASE/ RENT	Column 6 REVENUE SOURCE*
TYPE OF SPACE	0	0	Immed	Future	Immed	Future	0	0
Classroom	0	0	0	0	0	0	0	0
Instructional Lab	0	0	0	0	0	0	0	0
Offices	0	0	0	0	0	0	0	0
Study	0	0	0	0	0	0	0	0
Special/General Use	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0

* Capital Construction Fund (CCF), Research Building Revolving Fund (RBRF), Gift (GIFT), Grant (GR), Auxiliary Fund (AUX)

Attach a narrative describing the institutional contingency plan that addresses the space requirements of the proposed program or alternative delivery options, in the event that the request for capital construction or renovation is not approved.

_____   _____
Governing Board Capital Construction Officer   Date

Approved Policy   I-B-10   June 5, 2003

M. TABLE 3 – PROJECTED EXPENSE AND REVENUE ESTIMATES

All cost and revenue projections should be in constant dollars (do not include an inflation factor).

		ESTIMATED AMOUNT IN DOLLARS (PV)				
		Year 1	Year 2	Year 3	Year 4	Year 5
Operating Expenses:						
1	Faculty	$18,000.00	$18,000.00	$18,000.00	$18,000.00	$18,000.00
2	Financial Aid specific to program	0	0	0	0	0
3	Instructional Materials	0	0	0	0	0
4	Program Administration	0	0	0	0	0
5	Rent/Lease	0	0	0	0	0
6	Other Operating Costs	$873,930.00	$1,136,109.00	$1,485,681.00	$1,747,860.00	$2,097,432.00
7	Total Operating Expenses	$891,930.00	$1,154,109.00	$1,503,681.00	$1,765,860.00	$2,115,432.00
Program Start-Up Expenses						
8	Capital Construction	0	0	0	0	0
9	Equipment Acquisitions	0	0	0	0	0
10	Library Acquisitions	0	0	0	0	0
11	Total Program Start-Up Exp.	0	0	0	0	0
TOTAL PROGRAM EXPENSES		$891,930.00	$1,154,109.00	$1,503,681.00	$1,765,860.00	$2,115,432.00
Enrollment Revenue						
12	General Fund: State Support	0	0	0	0	0
13	Cash Revenue: Tuition	$54,600.00	$70,980.00	$92,820.00	$109,200.00	$131,040.00
14	Cash Revenue: Fees	$873,930.00	$1,136,109.00	$1,485,681.00	$1,747,860.00	$2,097,432.00
Other Revenue		0	0	0	0	0
15	Federal Grants	0	0	0	0	0
16	Corporate Grants/Donations	0	0	0	0	0
17	Other fund sources *	0	0	0	0	0
18	Institutional Reallocation **	0	0	0	0	0
TOTAL PROGRAM REVENUE		$928,530.00	$1,207,089.00	$1,578,501.00	$1,857,060.00	$2,228,472.00

** If revenues are projected in this line, please attach an explanation of the specific source of the funds. If reallocated, the specific departments and the impact the dollars will have on the departments that will provide the reallocated dollars.

_____   _____   _____
Signature of Governing Board Financial Officer   Title   Date

Approved Policy   I-B-12   June 5, 2003

2012-2013 PETITION/PROGRAM SHEET
Degree: Associate of Applied Science
Major: Aviation Technology
Emphasis: Fixed-wing
www.mesastate.edu/wccc/

About This Emphasis . . .

This program offers classroom academics, simulator training, and in-flight instruction. This program offers two tracks where flight students have the opportunity to obtain their pilot certificates and ratings in both airplanes and/or helicopters. All academic and flight training is certified under the Federal Aviation Administration FAR's Part 141 standards. Graduates of this program are well prepared for successful and exciting careers in the aerospace industry.

POLICIES:
1. It is your responsibility to determine whether you have met the requirements for your degree. Please see the MSC Catalog for a complete list of graduation requirements.
2. You must turn in your "Intent to Graduate" form to the Registrar's Office **by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December**.
3. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.**
4. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the WCCC Director for signature.
5. Finally, the WCCC Director or the department administrative assistant will take the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
6. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
7. NOTE: The semester before graduation, you may be required to take a Major Field Achievement Test (exit exam).

NAME: _____   **STUDENT ID #** _____

LOCAL ADDRESS AND PHONE NUMBER: _____

_____ **(   )** _____

I, (Signature)_____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

_____   _____20_____
Signature of Advisor   Date

_____   _____20_____
Signature of WCCC Director   Date

_____   _____20_____
Signature of Registrar   Date

Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration.

Degree Requirements:
- 2.00 cumulative GPA or higher in all MSC coursework
- A grade of "C" or higher must be achieved in achieved in coursework toward major content area.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- Program sheets are for advising purposes only. Because a program may have requirements specific to the degree, check with your advisor for additional guidelines, including prerequisites, grade point averages, grades, exit examinations, and other expectations. It is the student's responsibility to be aware of, and follow, all guidelines for the degree being pursued. Any exceptions or substitutions must be approved by the faculty advisor and/or Department Head. Courses related to teacher licensure must also be approved by the Teacher Education Dept.
- When filling out the program sheet a course can be used only once.
- See the "Undergraduate Graduation Requirements" in the Mesa State College catalog for additional graduation information.

GENERAL EDUCATION REQUIREMENTS (18 semester hours)
See the current Mesa State College catalog for a list of courses that fulfill the requirements below. If a course is on the general education list of options and a requirement for your major, you must use it to fulfill the major requirement and make a different selection within the general education requirement.

Course No Title	Sem.hrs	Grade	Term

English (6 semester hours)

ENGL 111 English Composition	3	_____	_____
ENGL 112 English Composition	3	_____	_____

Math: (4 semester hours)

MATH 108 Technical Mathematics	4	_____	_____

Social and Behavioral Sciences, Humanities or Applied Studies Courses (6 semester hours)

Course No Title	Sem.hrs	Grade	Term
_____ ____ _____	3	_____	_____
_____ ____ _____	3	_____	_____

Kinesiology (2 semester hours)

KINE 100 Health and Wellness	1	_____	_____
KINA 1____ _____	1	_____	_____

ASSOCIATE OF APPLIED SCIENCE: AVIATION TECHNOLOGY FIXED-WING COURSE REQUIREMENTS
(46 semester hours)

	Sem.hrs.	Grad	Term
AVTN 101 Private Pilot Ground School	4	_____	_____
AVTN 102 Private Pilot Flight	4	_____	_____
AVTN 111 Instrument Pilot Ground School	4	_____	_____
AVTN 112 Instrument Pilot Flight	4	_____	_____
AVTN 196 Special Topics	1	_____	_____
AVTN 201 Commercial Pilot Ground School	2	_____	_____
AVTN 202 Commercial Pilot Flight I	3	_____	_____
AVTN 203 Commercial Pilot Flight II	4	_____	_____
AVTN 205 Mountain Flying Ground School	1	_____	_____
AVTN 206 Crew Resource Management	1	_____	_____
AVTN 207 Multi-engine Ground School	1	_____	_____
AVTN 208 Multi-engine Flight	1	_____	_____
AVTN 210 Multi-engine Cross Country	2	_____	_____
AVTN 211 Fundamentals of Instruction	2	_____	_____
AVTN 212 Flight Instructor Ground School	2	_____	_____
AVTN 213 Flight Instructor Flight	1	_____	_____
AVTN 218 ATC Procedures	4	_____	_____
AVTN 221 Instrument Instr Grnd School	2	_____	_____
AVTN 222 Instrument Instructor Flight	1	_____	_____
AVTN 223 Multi-engine Instructor Flight	1	_____	_____
AVTN 296 Special Topics	1	_____	_____

Electives (3 semester hours)

_____ ____ _____ ____ _____ _____

SUGGESTED COURSE SEQUENCING FOR THE ASSOCIATE OF APPLIED SCIENCE WITH A MAJOR IN AVIATION TECHNOLOGY, EMPHASIS IN FIXED-WING

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Mesa State website for course availability.

FRESHMAN YEAR

Fall Semester		Hours
AVTN 101	Private Pilot Ground School	4
AVTN 102	Private Pilot Flight	4
MATH108	Technical Mathematics	4
ENGL 111	English Composition	3
AVTN 196	Special Topics	1
		16

Spring Semester		Hours
AVTN 111	Instrument Pilot Ground School	4
AVTN 112	Instrument Pilot Flight	4
AVTN 201	Commercial Pilot Ground School	2
AVTN 202	Commercial Pilot Flight I	3
AVTN 203	Commercial Pilot Flight II	4
		17

SOPHOMORE YEAR

Fall Semester		Hours
KINE 100	Health and Wellness	1
KINA 1___	Activity	1
AVTN 205	Mountain Flying Ground School	1
AVTN 206	Crew Resource Management	1
AVTN 207	Multi-engine Ground School	1
AVTN 208	Multi-engine Flight	1
AVTN 210	Multi-engine Cross Country Flight	2
AVTN 211	Fundamentals of Instruction	2
AVTN 212	Flight Instructor Ground School	2
AVTN 213	Flight Instructor Flight	1
AVTN 296	Special Topics	1
General Education Soc/Beh Sci., Humanities, Speech		3
		17

Spring Semester		Hours
ENGL 112	English Composition	3
AVTN 218	ATC Procedures	4
AVTN 221	Instrument Instr Grnd School	2
AVTN 222	Instrument Instructor Flight	1
AVTN 223	Multi-engine Instructor Flight	1
General Education Soc/Beh Sci., Humanities, Speech		3
Electives		3
		17

DEPARTMENT WORKSHEET FOR A COURSE ADDITION
Colorado Mesa University Curriculum Committees

NOTE: Each course addition must be submitted on a separate form.

Department Name: **Western Colorado Community College**
    If new department, please enter name:

Course prefix: **AVTN**   Course number: **223**   Credit hours: **1**

Course name: **Multi-engine Instructor Flight**

Course abbreviated catalog name (24 characters maximum): **Mult-eng Instr Flght**

Contact hours per week: Lecture **1**   Lab   Field   Studio   Other

Earliest term course can be offered: **Fall**   Earliest academic year: **2012-13**

Intended semesters for offering this course: Fall ☐   J-Term ☐   Spring ☒   Summer ☐

Is this to be a general education course? **No**   If yes, which category?

Is this to be an experimental course? **No**   If yes, use the Intra-Departmental Curriculum Change Memo.

List all prerequisites for this course. If none, indicate by checking here: ☐

Course	Credit Hours	Course	Credit Hours
1.		2.	
3.		4.	
5.		6.	
7.		8.	
9.		10.	

List all co-requisites for this course. If none, indicate by checking here: ☐

Course	Credit Hours	Course	Credit Hours
1.		2.	
3.		4.	
5.		6.	
7.		8.	
9.		10.	

(Submit a course modification request, as required, for each course listed above.)

List all programs of study for which this course will be a requirement or a listed choice, including all degrees, majors, minors, certificates, concentrations, cognates, emphases, and options. If none, indicate by checking here: ☐

	Degree Type	Program
1.	**AAS**	**Aviation Technology- Fixed-wing**
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

(Submit a program modification request and a revised program sheet for each program listed above. All prerequisites to this course <u>must</u> be included in each program of study listed above.)

List all courses for which this course is to be a prerequisite or corequisite. If none, indicate by checking here: ☐

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.

(Submit a course modification request, as required, for each course listed above.)

DUPLICATION: Is there overlapping content with present courses offered on campus? **No**
   If yes, explain:

FACULTY FTE: Will additional faculty FTE be required? **Yes**
   If yes, explain: **Adjunct Aviation Technology Instructor-Fixed-wing will be hired**

EQUIPMENT: Does the course require additional equipment? **No**
   If yes, explain:

LAB FACILITIES: Does the course require additional lab facilities? **No**
   If yes, explain:

Course description as it will appear in the printed catalog:
   Preparation in flight instruction for the addition of Multi-Engine Rating to the Flight Instructor Airplane Single Engine Land Certificate.

In addition to providing all the above information, also do the following:

1. Discuss the proposal with all departments that might be affected by the proposal.

2. Prepare the following support documentation in an MS Word file:
   a. Justification for the proposed new course (in narrative form),
   b. Student learning objectives, and
   c. Topical course outline.

3. Submit the course description to the Curriculum Committee's catalog description reviewer.

4. Submit the above documentation to Library's Curriculum Committee representative.

5. Obtain departmental approval according to department-specific procedures.

6. Submit all documents to Academic Affairs via email to curriculum@coloradomesa.edu.

Refer to the Curriculum Committee's published deadlines for #3, 4, 5, and 6.

PROPOSED AND PREPARED BY:
Name: **William J. McCracken Jr.**   Date: **9/22/2011**

REVIEWED BY DEPARTMENT'S CURRICULUM COMMITTEE REPRESENTATIVE:
Name: **Gary Looft**   Date: **9/22/2011**

APPROVED BY DEPARTMENT HEAD:
Name: **Brigitte Sundermann**   Date: **9/22/2011**

Submit this form to Academic Affairs via email to curriculum@coloradomesa.edu.

Course: AVTN 223

Title: Multi-engine Instructor Flight

Credit Hours: 1 (15 contact hours)

Course Description: Preparation in flight instruction for the addition of Multi-Engine Rating to the Flight Instructor Airplane Single Engine Land Certificate.

COURSE OBJECTIVES: (STANDARD COMPETENCIES)
Upon successful completion of this course the student should be able to:

Demonstrate instructional mastery in the areas of Fundamentals of Instructing, Technical Subject Areas, Preflight Preparation and Lesson, Multi-engine Operations, Ground and Airport Operations, Take Offs, Climbs, Approaches and Landings, Fundamentals of Flight, Stalls and Maneuvering During Slow Flight, Basic Instrument Flight, Performance and Ground Maneuvers, Emergency Operations, and After Landing Procedures by passing an FAA Practical Test for Flight Instructor Multi-Engine Land.

TOPICAL OUTLINE:

I.   Gain Instructional Proficiency in a Minimum of 15 hours of Pilot in Command Flight Time in a Multi-Engine Airplane.
   A.   Multi-Engine Airplane systems
   B.   Flight from the Right Seat
   C.   Takeoffs, Approaches and Landings
   D.   All required Maneuvers
   E.   Instrument Flight
   F.   System Emergency Procedures
   G.   Engine Out Emergency Procedures
   H.   FAA Practical Test

DEPARTMENT WORKSHEET FOR PROGRAM CREATION, MODIFICATION, OR DELETION
Colorado Mesa University Curriculum Committees

NOTE: All related course changes must be submitted on separate forms.

DEPARTMENT NAME: **Western Colorado Community College**
        If new department, please enter name:

Proposal Type: **New Program**

PROGRAM: Degree type: **AAS**   Program/degree Name: **Aviation Technology**
                                      Concentration/Emphasis: **Helicopter**

Effective Term: **Fall**   Effective Academic Year: **2012-13**

1. IS THIS A PROPOSAL TO <u>ADD</u> A NEW ACADEMIC PROGRAM? If yes:
    1. Discuss the proposal with all departments that might be affected by proposal.
    2. Prepare the support documentation in a MS Word file as indicated in the Curriculum Policies and Procedures Manual, Section IV. F. 3.
    3. Prepare a program sheet as an MS Word file (using prescribed format*).
    4. Submit documentation to Library's Curriculum Committee representative by published deadline.
    5. Obtain departmental approval according to department-specific procedures.
    6. Submit all information via web forms to Academic Affairs by the published deadline.

2. IS THIS A PROPOSAL TO <u>MODIFY</u> AN EXISTING ACADEMIC PROGRAM? If yes:
    1. If change to program name, enter new name:
        If change to the concentration/emphasis, enter:
    2. Is there a revision to the program sheet?
    3. Discuss the proposal with all departments that might be affected by proposal.
    4. Prepare the following support documentation in an MS Word file as indicated in the Curriculum Policies and Procedures Manual, Section IV. L. 2.
    5. Prepare a program sheet as a MS Word file (using prescribed format*).
    6. Obtain departmental approval according to department-specific procedures.
    7. Submit all information via web forms to Academic Affairs by the published deadline.

3. IS THIS A PROPOSAL TO <u>DELETE</u> AN EXISTING ACADEMIC PROGRAM? If yes:
    1. Discuss the proposal with all departments that might be affected by proposal.
    2. Prepare the following support documentation in an MS Word file as indicated in the Curriculum Policies and Procedures Manual, Section IV. K. 1.
    3. Obtain departmental approval according to department-specific procedures.
    4. Submit all information via web forms to Academic Affairs by the published deadline.

* Forms for enrollment projections, capacity estimates, and expense/revenue projections can be found on the Curriculum Committee's website. The most up-to-date program sheets are available as Word documents at R:\Curriculum\Program Sheets for Curriculum Program Modifications.

PROPOSED AND PREPARED BY:
Name: **William J. McCracken Jr.**   Date: **9/22/2011**

REVIEWED BY DEPARTMENT'S CURRICULUM COMMITTEE REPRESENTATIVE:
Name: **Gary Looft**   Date: **9/22/2011**

APPROVED BY DEPARTMENT HEAD:
Name: **Brigitte Sundermann**   Date: **9/22/2011**

Submit this form to Academic Affairs via email to <u>curriculum@coloradomesa.edu</u>.

A. <u>**Name of Program: Aviation Technology**</u>
   <u>**Degree:**</u> Associate of Applied Science
   <u>**Emphasis:**</u> Helicopter

B. <u>**Department Proposing Program:**</u> Western Colorado Community College

C. <u>**Contact Information**</u>**:**

William J. McCracken Jr.
Assistant Technical Professor
Department Head – Manufacturing and Industrial Services Department
2508 Blichmann Ave.
Grand Junction, CO 81506
(970)248-1666
wimccrac@mesastate .edu

John Kay
Suncrest Aviation
826 N.100 St.E. #7
Spanish Fork, Utah 84660
435-660-1549
suncrestaviation@yahoo.com

D. <u>**Program Goals**</u>**:**

- Provide technical certification for college credit as identified in Mesa State College's mission established by the Colorado Legislature, as contained in Colorado Revised Statutes (C.R.S.) 23-53-101: "Mesa State College shall also maintain a community college role and mission, including vocational and technical programs. For its role as a community college - Mesa, Delta, Montrose, San Miguel, and Ouray Counties. (The College cooperates with Adams State College in providing two-year programs for Gunnison and Hinsdale Counties.)"
- Prepare students for FAA certification.
- Offer opportunities to enhance knowledge and expertise through education.
- Enhance technical skills that make our students more marketable.
- Provide students the current pedagogy in Aviation Technology.
- Prepare Aviation Technology Technical Certificate students for BS programs in Aviation Technology.

E. New Course Identification:
- AVTN 108- GPS for Pilots- 1 Credit Hour
- AVTN 115- ATC Phraseology I- 1 Credit Hour
- AVTN 140- Aircraft Systems Pilots/Airframe- 3 Credit Hours
- AVTN 141- Aircraft Systems Pilots/Powerplant- 3 Credit Hours
- AVTN 242- ATC Phraseology II- 1 Credit Hour
-

All courses listed are approved with the State of Colorado under AVT prefix
Colorado Community College System (CCCS) www.cccs.com

F. Faculty Qualifications:
John Kay, Phone: 435-660-1549
 Website: www.suncrestaviation.com
John Kay is a certified instructor in Private Pilot, Instrument Rating, Commercial Pilot, Certified Flight Instructor (CFI), and Certified Flight Instructor Instrument (CFII).

Kyle Davis, Phone: 801-494-9841
 Website: www.suncrestaviation.com
Kyle Davis is a certified instructor in Helicopter, Commercial Helicopter Pilot, Certified Flight Instructor Instrument-Helicopter (CFII).

G. Statement:

According to the FAA, the aviation industry is expected to more than double during the next twenty years, therefore there will be and is an increasing demand for Helicopter pilots. There are many career opportunities for the professional helicopter pilot. Graduates have a wide variety of choices in the industry as companies are continually searching for qualified pilots. Below is a list of several opportunities for a career as a professional helicopter pilot.

o Helicopter Flight Instruction	o Forestry
o Air Medical Transport	o Skydiving
o Aerial Photography	o Heli- Skiing
o Agricultural Spraying	o Movie Production
o Executive Charter	o Heavy Lift
o Scientific Study and Research	o Search and Rescue
o Law Enforcement	o Offshore Oil Support
o Sightseeing Tours	o Pipeline and Power Line Patrol
o Media - TV and Radio News	o Fire Fighting

- Survey and Mapping
- Military

H. **Rationale**:

The FAA-Industry Training Standards (FITS) program is a partnership between FAA, Industry, and Academia designed to enhance general aviation safety. This is accomplished by developing flight training programs that are more convenient, more accessible, less expensive, and more relevant to today's users of the National Airspace System. The FITS program creates scenario-based, learner-focused training materials that encourage practical application of knowledge and skills. The goal is to help pilots of technically-advanced aircraft (TAAs) -- which have more automation and often greater performance capability -- develop the risk management skills and in-depth systems knowledge needed to safely operate and maximize the capability of these aircraft in the National Airspace System (NAS).

I. **Delivery Mode**:

The courses within the Aviation Technology Associate of Applied Science Program will consist of the following delivery:

- Lecture

- Computer-based instruction

- On-line instruction

- Laboratory hands-on flight instruction

J. **Department Recommendation for Library Collection**:

Please refer to the Library Assessment Form

K. TABLE 1: ENROLLMENT PROJECTIONS

Name of Program: Aviation Technology – Helicopter

Degree Title   Associate of Applied Science

Name of Institution: Western Colorado Community College

DEFINITIONS:

Academic year is the period beginning July 1 and concluding June 30.

Headcount projections represent an unduplicated count of those students officially admitted to the program and enrolled at the institution during the academic year.

FTE is defined as the full-time equivalent number of those students majoring in the program, regardless of the classes enrolled, during the academic year.

Program graduate is defined as a student who finishes all academic program requirements and graduates with a formal award within a particular academic year.

SPECIAL NOTES:

To calculate the annual headcount enrollment, add new enrollees to the previous year headcount and subtract the number who graduated in the preceding year. Adjust by the anticipated attrition rate.

To calculate FTE, multiply the number of students times the projected number of credit hours degree seeking students will be typically enrolled in per year and divide by 30.

The data in each column is the annual **unduplicated** number of declared program majors. Since this table documents program demand, course enrollments are not relevant and shall not be included in the headcount or FTE data.

		Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Full Implementation
1-a	In-state Headcount	21	25	25	27	28	
1-b	Out-of-State Headcount	1	1	2	2	3	
2	Program Headcount	22	26	27	29	31	
3-a	In-state FTE						
3-b	Out-of-State FTE						
4	Program FTE						
5	Program Graduates	20	24	25	27	29	

_____   _____
Signature of Governing Board Officer   Date

L. TABLE 2: PHYSICAL CAPACITY ESTIMATES

Name of Program: Aviation Technology – Helicopter

Name of Institution: Western Colorado Community College

Purpose: This table documents the physical capacity of the institution to offer the program and/or the plan for achieving the capacity. Complete A or B.

Part A

I certify that this proposed degree program can be fully implemented and accommodate the enrollment projections provided in this proposal without requiring additional space or renovating existing space during the first five years.

_____ _____
Governing Board Capital Construction Officer   Date

Part B

	Column 1	Column 2	Column 3		Column 4		Column 5	Column 6
ASSIGNABLE SQUARE FEET	TOTAL NEEDED	AVAILABLE	RENOVATION		NEW CONSTRUCTION		LEASE/ RENT	REVENUE SOURCE*
TYPE OF SPACE	0	0	Immed	Future	Immed	Future	0	0
Classroom	0	0	0	0	0	0	0	0
Instructional Lab	0	0	0	0	0	0	0	0
Offices	0	0	0	0	0	0	0	0
Study	0	0	0	0	0	0	0	0
Special/General Use	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0

* Capital Construction Fund (CCF), Research Building Revolving Fund (RBRF), Gift (GIFT), Grant (GR), Auxiliary Fund (AUX)

Attach a narrative describing the institutional contingency plan that addresses the space requirements of the proposed program or alternative delivery options, in the event that the request for capital construction or renovation is not approved.

_____ _____
Governing Board Capital Construction Officer   Date

Approved Policy   I-B-10   June 5, 2003

M. TABLE 3 – PROJECTED EXPENSE AND REVENUE ESTIMATES

All cost and revenue projections should be in constant dollars (do not include an inflation factor).

		ESTIMATED AMOUNT IN DOLLARS (PV)				
		Year 1	Year 2	Year 3	Year 4	Year 5
Operating Expenses:						
1	Faculty	$22,800.00	$22,800.00	$22,800.00	$22,800.00	$22,800.00
2	Financial Aid specific to program	0	0	0	0	0
3	Instructional Materials	0	0	0	0	0
4	Program Administration	0	0	0	0	0
5	Rent/Lease	0	0	0	0	0
6	Other Operating Costs	$1,976,000.00	$2,371,200.00	$2,245,000.00	$2,424,600.00	$2,604,200.00
7	Total Operating Expenses	$1,998,800.0	$2,394,000.00	$2,267,800.00	$2,447,400.00	$2,627,000.00
Program Start-Up Expenses						
8	Capital Construction	0	0	0	0	0
9	Equipment Acquisitions	0	0	0	0	0
10	Library Acquisitions	0	0	0	0	0
11	Total Program Start-Up Exp.	0	0	0	0	0
TOTAL PROGRAM EXPENSES		$1,998,800.0	$2,394,000.00	$2,267,800.00	$2,447,400.00	$2,627,000.00
Enrollment Revenue						
12	General Fund: State Support	0	0	0	0	0
13	Cash Revenue: Tuition	$175,560.00	$209,000.00	$225,720.00	$242,440.00	$259,160.00
14	Cash Revenue: Fees	$1,976,000.00	$2,371,200.00	$2,470,000.00	$2,667,600.00	$2,865,200.00
Other Revenue						
15	Federal Grants	0	0	0	0	0
16	Corporate Grants/Donations	0	0	0	0	0
17	Other fund sources *	0	0	0	0	0
18	Institutional Reallocation **	0	0	0	0	0
TOTAL PROGRAM REVENUE		$2,151,560.00	$2,580,200.00	$2,695,720.00	$2,910,040.00	$3,124,360.00

** If revenues are projected in this line, please attach an explanation of the specific source of the funds. If reallocated, the specific departments and the impact the dollars will have on the departments that will provide the reallocated dollars.

_____ _____ _____

Signature of Governing Board Financial Officer   Title   Date

Approved Policy   I-B-12   June 5, 2003

About This Emphasis . . .

This program offers classroom academics and in-flight instruction. This program offers two tracks where flight students have the opportunity to obtain their pilot certificates and ratings in both airplanes and/or helicopters. All academic and flight training conforms to the Federal Aviation Administration FAR's Part 141 standards. Graduates of this program are well prepared for successful and exciting careers in the aerospace industry.

POLICIES:
1. It is your responsibility to determine whether you have met the requirements for your degree. Please see the MSC Catalog for a complete list of graduation requirements.
2. You must turn in your "Intent to Graduate" form to the Registrar's Office **by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December**.
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7. NOTE: The semester before graduation, you may be required to take a Major Field Achievement Test (exit exam).

NAME: _____   **STUDENT ID #** _____

LOCAL ADDRESS AND PHONE NUMBER: _____

(_____)_____

I, (Signature)_____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

_____   _____20_____
Signature of Advisor   Date

_____   _____20_____
Signature of WCCC Director   Date

_____   _____20_____
Signature of Registrar   Date

Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration.

Degree Requirements:
- 2.00 cumulative GPA or higher in all MSC coursework
- A grade of "C" or higher must be achieved in achieved in coursework toward major content area.
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See the current Mesa State College catalog for a list of courses that fulfill the requirements below. If a course is on the general education list of options and a requirement for your major, <u>you must use it to fulfill the major requirement</u> and make a different selection within the general education requirement.

Course No Title	Sem.hrs	Grade	Term

English (6 semester hours)

ENGL 111 English Composition	3	_____	_____
ENGL 112 English Composition	3	_____	_____

Math: (4 semester hours)

MATH 108 Technical Mathematics	4	_____	_____

Social and Behavioral Sciences, Humanities or Applied Studies Courses (6 semester hours)

Course No Title	Sem.hrs	Grade	Term
_____ ____ _____	3	_____	_____
_____ ____ _____	3	_____	_____

Kinesiology (2 semester hours)

KINE 100 Health and Wellness	1	_____	_____
KINA 1____ _____	1	_____	_____

ASSOCIATE OF APPLIED SCIENCE: AVIATION TECHNOLOGY - HELICOPTER COURSE REQUIREMENTS
(47 semester hours)

Course	Sem.hrs.	Grad	Term
PHYS 100 (<u>or higher</u>) Concepts of Physics	3	_____	_____
AVTN 101 Private Pilot Ground School	4	_____	_____
AVTN 104 Private Pilot Flight-Helicopter	4	_____	_____
AVTN 105 Aviation Meteorology	4	_____	_____
AVTN 111 Instrument Pilot Ground School	4	_____	_____
AVTN 114 Instrument Pilot Flight-Helicopter	1	_____	_____
AVTN 140 Aircraft Sys Pilots/Airframe	3	_____	_____
AVTN 141 Aircraft Sys Pilots/Powerplant	3	_____	_____
AVTN 201 Comm Pilot Ground School	2	_____	_____
AVTN 204 Commercial Flight I-Helicopter	2	_____	_____
AVTN 206 Crew Resource Management	1	_____	_____
AVTN 211 Fundamentals of Instruction	2	_____	_____
AVTN 212 Flight Instructor Ground School	2	_____	_____
AVTN 214 Commercial Flight II-Helicopter	5	_____	_____
AVTN 215 Flight Instructor Flight-Helicopter	1	_____	_____
AVTN 221 Instrument Inst Grnd School	2	_____	_____
AVTN 224 CFI Instrument-Helicopter	4	_____	_____

<u>Electives</u> (1 semester hour)
Choose one semester hour from:
AVTN 108 GPS for Pilots (1)
AVTN 115 ATC Phraseology I (1)
AVTN 242 ATC Phraseology II (1)

_____ ____ _____ ____ _____ _____

SUGGESTED COURSE SEQUENCING FOR THE ASSOCIATE OF APPLIED SCIENCE WITH A MAJOR IN AVIATION TECHNOLOGY, EMPHASIS IN HELICOPTER

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Mesa State website for course availability.

FRESHMAN YEAR

Fall Semester		Hours	Spring Semester		Hours
AVTN 101	Private Pilot Ground School	4	KINE 100	Health and Wellness	1
AVTN 104	Private Pilot Flight-Helicopter	4	AVTN 111	Instrument Pilot Ground School	4
AVTN 105	Aviation Meteorology	4	AVTN 114	Instrument Pilot Flight-Helicopter	1
MATH108	Technical Mathematics	4	AVTN 140	Aircraft Sys Pilots/Airframe	3
		16	AVTN 141	Aircraft Sys Pilots/Powerplant	3
			AVTN 201	Comm Pilot Ground School	2
			ENGL 111	English Composition	3
					17

SOPHOMORE YEAR

Fall Semester		Hours	Spring Semester		Hours
AVTN 204	Commercial Flight I-Helicopter	2	AVTN 214	Commercial Flight II-Helicopter	5
AVTN 206	Crew Resource Management	1	AVTN 215	Flight Instructor Flight-Helicopter	1
AVTN 211	Fundamentals of Instruction	2	AVTN 221	Instrument Inst Grnd School	2
AVTN 212	Flight Instructor Ground School	2	AVTN 224	CFI Instrument-Helicopter	4
General Education	Soc/Beh Sci., Humanities, Speech	3	General Education	Soc/Beh Sci., Humanities, Speech	3
ENGL 112	English Composition	3	Electives		1
KINA XXX	Activity	1			16
PHYS 100 (or higher)	Concepts of Physics	3			
		17			

<div align="center">

DEPARTMENT WORKSHEET FOR A COURSE ADDITION
Colorado Mesa University Curriculum Committees

NOTE: Each course addition must be submitted on a separate form.

</div>

Department Name: **Western Colorado Community College**
      If new department, please enter name:

Course prefix: **AVTN**   Course number: **108**   Credit hours: **1**

Course name: **GPS for Pilots**

Course abbreviated catalog name (24 characters maximum): **GPS for Pilots**

Contact hours per week: Lecture **1**   Lab   Field   Studio   Other

Earliest term course can be offered: **Fall**   Earliest academic year: **2012-13**

Intended semesters for offering this course: Fall ☐   J-Term ☐   Spring ☒   Summer ☐

Is this to be a general education course? **No**   If yes, which category?

Is this to be an experimental course? **No**   If yes, use the Intra-Departmental Curriculum Change Memo.

List all prerequisites for this course. If none, indicate by checking here: ☐

Course	Credit Hours	Course	Credit Hours
1.		2.	
3.		4.	
5.		6.	
7.		8.	
9.		10.	

List all co-requisites for this course. If none, indicate by checking here: ☐

Course	Credit Hours	Course	Credit Hours
1.		2.	
3.		4.	
5.		6.	
7.		8.	
9.		10.	

<div align="center">

(Submit a course modification request, as required, for each course listed above.)

</div>

List all programs of study for which this course will be a requirement or a listed choice, including all degrees, majors, minors, certificates, concentrations, cognates, emphases, and options. If none, indicate by checking here: ☐

	Degree Type	Program
1.	**AAS**	**Aviation Technology- Helicopter**
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

(Submit a program modification request and a revised program sheet for each program listed above. All prerequisites to this course <u>must</u> be included in each program of study listed above.)

List all courses for which this course is to be a <u>prerequisite or corequisite.</u> If none, indicate by checking here: ☐

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.

(Submit a course modification request, as required, for each course listed above.)

DUPLICATION: Is there overlapping content with present courses offered on campus? **No**
   If yes, explain:

FACULTY FTE: Will additional faculty FTE be required? **Yes**
   If yes, explain: **Adjunct Aviation Technology Instructor- Helicopter will be hired**

EQUIPMENT: Does the course require additional equipment? **No**
   If yes, explain:

LAB FACILITIES: Does the course require additional lab facilities? **No**
   If yes, explain:

Course description as it will appear in the printed catalog:
   Focuses on the Global Positioning System and its uses in aviation.

In addition to providing all the above information, also do the following:

1. Discuss the proposal with all departments that might be affected by the proposal.

2. Prepare the following support documentation in an MS Word file:
   a. Justification for the proposed new course (in narrative form),
   b. Student learning objectives, and
   c. Topical course outline.

3. Submit the course description to the Curriculum Committee's catalog description reviewer.

4. Submit the above documentation to Library's Curriculum Committee representative.

5. Obtain departmental approval according to department-specific procedures.

6. Submit all documents to Academic Affairs via email to curriculum@coloradomesa.edu.

Refer to the Curriculum Committee's published deadlines for #3, 4, 5, and 6.

PROPOSED AND PREPARED BY:
Name: **William J. McCracken Jr.**   Date: **9/22/2011**

REVIEWED BY DEPARTMENT'S CURRICULUM COMMITTEE REPRESENTATIVE:
Name: **Gary Looft**   Date: **9/22/2011**

APPROVED BY DEPARTMENT HEAD:
Name: **Brigitte Sundermann**   Date: **9/22/2011**

Submit this form to Academic Affairs via email to curriculum@coloradomesa.edu.

Course: AVTN 108

Title: GPS for Pilots

Credit Hours: 1 (15 contact hours)

Course Description: Focuses on the Global Positioning System and its uses in aviation.

STANDARD COMPETENCIES:

I.   Demonstrate an understanding of the Global Positioning System and how it functions
II. Demonstrate the ability to plan and execute a simulated flight using the Global
     Positioning System

TOPICAL OUTLINE:

I.   Stage I- How GPS Works
       A. Terminology
       B. Definitions
       C. GPS Operation
II.   Stage 2- How GPS Receiver Functions are Organized
       A. Panel
           1. Key and Knob Functions
           2. Displays
III.   Stage 3- Communications
       A. COM/NAV Features
       B. Setting Communications
       C. Initializing Position
       D. Communications Exercise
IV.   Stage 4- Page Groups
       A. Navigation Group
           1. Default NAV
           2. Map
           3. NAVCOM
           4. Satellite Status
               1. Waypoint Group
       B. Airport Location, Runway, and Frequency
       C. Airport Approach, Arrival, and Departure
       D. Intersection, NDB, VOR, User Waypoint
V.   Stage 5- Page Groups (cont.)
       A. Aux Group
           1. Flight Planning
           2. Utility
           3. Setup
       B. Nearest Group
           1. Nearest Airport
           2. Nearest Intersection
           3. Nearest NDB

4. Nearest VOR
5. Nearest User
6. Nearest ARTCC
7. Nearest Flight Service
8. Nearest Airspace

VI. Stage 6- Navigating Through Functions
   A. Direct-To Function
   B. Flight Plans
     1. Creating
     2. Editing
     3. Saving
     4. Activating

VII. Stage 7- Navigating Through Functions (cont.)
   A. Approach Procedures
   B. Departure Procedures
   C. Arrival Procedures

VIII. Stage 8- Navigating Through Functions (cont.)
   A. Holding Procedures
   B. DME Arc

IX. Stage 9- Regulations Associated with GPS

X. Stage 10- Flight Scenario 1
   A. Planning a DME Arc Approach with GPS
   B. Execution of DME Arc Approaches

XI. Stage 11- Flight Scenario 2
   A. Planning a Non-Precision Approach with GPS
     1. Execution of Non-Precision Approaches

XII. Stage 12- Flight Scenario 3
   A. Planning a Precision Approach with GPS
   B. Execution of Precision Approaches

XIII. Stage 13- Flight Scenario 4
   A. Planning a Missed Approach Procedure with GPS
   B. Execution of Missed Approach Procedures

XIV. Stage 14- Flight Scenario 5
   A. Planning for Cross-Country Flight Using GPS
   B. Execution of Cross-Country Flight

DEPARTMENT WORKSHEET FOR A COURSE ADDITION
Colorado Mesa University Curriculum Committees

NOTE: Each course addition must be submitted on a separate form.

Department Name: **Western Colorado Community College**
        If new department, please enter name:

Course prefix: **AVTN**   Course number: **115**   Credit hours: **1**

Course name: **ATC Phraseology I**

Course abbreviated catalog name (24 characters maximum): **ATC Phraseology I**

Contact hours per week: Lecture **1**   Lab   Field   Studio   Other

Earliest term course can be offered: **Fall**   Earliest academic year: **2012-13**

Intended semesters for offering this course: Fall ☐   J-Term ☐   Spring ☒   Summer ☐

Is this to be a general education course? **No**   If yes, which category?

Is this to be an experimental course? **No**   If yes, use the Intra-Departmental Curriculum Change Memo.

List all prerequisites for this course. If none, indicate by checking here: ☐

Course	Credit Hours	Course	Credit Hours
1.		2.	
3.		4.	
5.		6.	
7.		8.	
9.		10.	

List all co-requisites for this course. If none, indicate by checking here: ☐

Course	Credit Hours	Course	Credit Hours
1.		2.	
3.		4.	
5.		6.	
7.		8.	
9.		10.	

(Submit a course modification request, as required, for each course listed above.)

List all programs of study for which this course will be a requirement or a listed choice, including all degrees, majors, minors, certificates, concentrations, cognates, emphases, and options. If none, indicate by checking here: ☐

	Degree Type	Program
1.	**AAS**	**Aviation Technology- Helicopter**
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

(Submit a program modification request and a revised program sheet for each program listed above. All prerequisites to this course <u>must</u> be included in each program of study listed above.)

List all courses for which this course is to be a prerequisite or corequisite. If none, indicate by checking here: ☐

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.

(Submit a course modification request, as required, for each course listed above.)

DUPLICATION: Is there overlapping content with present courses offered on campus? **No**
   If yes, explain:

FACULTY FTE: Will additional faculty FTE be required? **Yes**
   If yes, explain: **Adjunct Aviation Technology Instructor- Helicopter will be hired**

EQUIPMENT: Does the course require additional equipment? **No**
   If yes, explain:

LAB FACILITIES: Does the course require additional lab facilities? **No**
   If yes, explain:

Course description as it will appear in the printed catalog:
   Focuses on the proper use of phraseology in the Air Traffic Control System.

In addition to providing all the above information, also do the following:

1. Discuss the proposal with all departments that might be affected by the proposal.

2. Prepare the following support documentation in an MS Word file:
   a. Justification for the proposed new course (in narrative form),
   b. Student learning objectives, and
   c. Topical course outline.

3. Submit the course description to the Curriculum Committee's catalog description reviewer.

4. Submit the above documentation to Library's Curriculum Committee representative.

5. Obtain departmental approval according to department-specific procedures.

6. Submit all documents to Academic Affairs via email to curriculum@coloradomesa.edu.

Refer to the Curriculum Committee's published deadlines for #3, 4, 5, and 6.

PROPOSED AND PREPARED BY:
Name: **William J. McCracken Jr.**   Date: **9/22/2011**

REVIEWED BY DEPARTMENT'S CURRICULUM COMMITTEE REPRESENTATIVE:
Name: **Gary Looft**   Date: **9/22/2011**

APPROVED BY DEPARTMENT HEAD:
Name: **Brigitte Sundermann**   Date: **9/22/2011**

Submit this form to Academic Affairs via email to curriculum@coloradomesa.edu.

Course: AVTN 115

Title: ATC Phraseology I

Credit Hours: 1 (15 contact hours)

Course Description: Focuses on the proper use of phraseology in the Air Traffic Control System.

STANDARD COMPETENCIES:

I.   Demonstrate an understanding of correct ATC phraseology and abbreviations
II.   Participate in role-playing in order to demonstrate the ability to effectively communicate in the ATC System

TOPICAL OUTLINE:

I.   Stage 1- Air Traffic Controller Phraseology
    A.   What it is
    B.   Why it is Important
    C.   Examples of Correct Phraseology
    D.   Examples of Incorrect Phraseology
II.   Stage 2- Acronyms and Abbreviations
    A.   Definitions
    B.   Examples
III.   Stage 3- Correct Phraseology Usage
    A.   Heading and Altitude Change
    B.   Weather Deviation
    C.   Departure/Approach Clearance
    D.   Vector Clearance
    E.   Traffic Advisories
    F.   Amended Clearance
IV.   Stage 4- Readbacks
    A.   Definition
    B.   Examples of Clearances and Readbacks
V.   Stage 5- Communications in Uncontrolled Airspace
    A.   Blind Transmissions
    B.   CTAF
    C.   Unicom
    D.   Position Reporting
    E.   Part-Time Towers
VI.   Stage 6- Effective vs. Ineffective Communication
    A.   Effective Two-Way Communication
    B.   Accident Report Study 1- Accident Related to Consequences of Ineffective Communication

VII.   Stage 7- ATC Phraseology Application
    A.   Role-Playing Scenario 1- Ineffective Communication
VIII. Stage 8- Did You Say What You Meant to Say?
    A.   Listening to Yourself
    B.   Accident Report Study 2- Accident Related to Failure to Say What was Meant to be Said
IX.   Stage 9 - ATC Phraseology Application
    A.   Role-Playing Scenario 2- Failure to Say What was Meant to be Said
X.   Stage 10- Consequences of Incorrect Phraseology
    A.   What Constitutes Incorrect Phraseology
    B.   Accident Report Study 3- Accident Related to Consequences of Incorrect Phraseology
XI.   Stage 11- ATC Phraseology Application
    A.   Role-Playing Scenario 3- Incorrect Phraseology
XII.   Stage 12- Communications Misunderstandings
    A.   How Communications Misunderstandings Occur
    B.   Accident Report 4- Accident Related to Communications Misunderstandings
XIII. Stage 13- ATC Phraseology Application
    A.   Role-Playing Scenario 4- Communications Misunderstandings

DEPARTMENT WORKSHEET FOR A COURSE ADDITION
Colorado Mesa University Curriculum Committees

NOTE: Each course addition must be submitted on a separate form.

Department Name: **Western Colorado Community College**
　　　If new department, please enter name:

Course prefix: **AVTN**　　　　　Course number: **140**　　　　　Credit hours: **3**

Course name: **Aircraft Systems for Pilots – Airframe**

Course abbreviated catalog name (24 characters maximum): **Air Sys Plt-Airframe**

Contact hours per week:　Lecture **3**　　　Lab　　　　Field　　　　Studio　　　　Other

Earliest term course can be offered: **Fall**　　　　Earliest academic year: **2012-13**

Intended semesters for offering this course:　Fall ☐　　J-Term ☐　　Spring ☒　　Summer ☐

Is this to be a general education course? **No**　　If yes, which category?

Is this to be an experimental course? **No**　　　If yes, use the Intra-Departmental Curriculum Change Memo.

List all prerequisites for this course. If none, indicate by checking here: ☐

Course	Credit Hours	Course	Credit Hours
1.		2.	
3.		4.	
5.		6.	
7.		8.	
9.		10.	

List all co-requisites for this course. If none, indicate by checking here: ☐

Course	Credit Hours	Course	Credit Hours
1.		2.	
3.		4.	
5.		6.	
7.		8.	
9.		10.	

(Submit a course modification request, as required, for each course listed above.)

List all programs of study for which this course will be a requirement or a listed choice, including all degrees, majors, minors, certificates, concentrations, cognates, emphases, and options. If none, indicate by checking here: ☐

	Degree Type	Program
1.	**AAS**	**Aviation Technology- Helicopter**
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

(Submit a program modification request and a revised program sheet for each program listed above. All prerequisites to this course must be included in each program of study listed above.)

List all courses for which this course is to be a prerequisite or corequisite. If none, indicate by checking here: ☐

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.

(Submit a course modification request, as required, for each course listed above.)

DUPLICATION: Is there overlapping content with present courses offered on campus? **No**
 If yes, explain:

FACULTY FTE: Will additional faculty FTE be required? **Yes**
 If yes, explain: **Adjunct Aviation Technology Instructor- Helicopter will be hired**

EQUIPMENT: Does the course require additional equipment? **No**
 If yes, explain:

LAB FACILITIES: Does the course require additional lab facilities? **No**
 If yes, explain:

Course description as it will appear in the printed catalog:
 Introduction to the basic mechanical systems and structural components of aircraft to supplement instruction received in flight training.

In addition to providing all the above information, also do the following:

1. Discuss the proposal with all departments that might be affected by the proposal.

2. Prepare the following support documentation in an MS Word file:
   a. Justification for the proposed new course (in narrative form),
   b. Student learning objectives, and
   c. Topical course outline.

3. Submit the course description to the Curriculum Committee's catalog description reviewer.

4. Submit the above documentation to Library's Curriculum Committee representative.

5. Obtain departmental approval according to department-specific procedures.

6. Submit all documents to Academic Affairs via email to curriculum@coloradomesa.edu.

Refer to the Curriculum Committee's published deadlines for #3, 4, 5, and 6.

PROPOSED AND PREPARED BY:
Name: **William J. McCracken Jr.**   Date: **9/22/2011**

REVIEWED BY DEPARTMENT'S CURRICULUM COMMITTEE REPRESENTATIVE:
Name: **Gary Looft**   Date: **9/22/2011**

APPROVED BY DEPARTMENT HEAD:
Name: **Brigitte Sundermann**   Date: **9/22/2011**

Submit this form to Academic Affairs via email to curriculum@coloradomesa.edu.

Course: AVTN 140

Title: Aircraft Systems for Pilots – Airframe

Credit Hours: 3 (45 contact hours)

Course Description: Introduction to the basic mechanical systems and structural components of aircraft to supplement instruction received in flight training.

COURSE OBJECTIVES: (STANDARD COMPETENCIES)
Upon successful completion of this course the student should be able to:

I.   Ground handling and servicing.
II.   Maintenance regulation compliance requirements.
III.   Aircraft instrument systems.
IV.   Aircraft avionics.
V.   Sheet metal and composite structures.
VI.   Landing gear systems.
VII.   Electrical systems.

TOPICAL OUTLINE:

I.   Demonstrate proper fueling, tie-down, and pre-flight procedures. (I)
II.   Identify applicable compliance requirements for maintenance records. (II)
III.   Describe the operational principles of gyroscopic, vacuum, pitot-static, and electrical instruments systems. (III)
IV.   Describe the operational principles of basic navigational and communication systems including antennae identification and frequency bands. (IV)
V.   Identify basic sheet metal and composite aircraft structures and perform basic repair procedures to both. (V)
VI.   Properly perform and document items of preventative maintenance on aircraft landing gear systems.
VII.   Describe the operational principles of aircraft power generation and distributions systems. (VI)

NOTE: Each course addition must be submitted on a separate form.

Department Name: **Western Colorado Community College**
        If new department, please enter name:

Course prefix: **AVTN**   Course number: **141**   Credit hours: **3**

Course name: **Aircraft Systems for Pilots - Powerplant**

Course abbreviated catalog name (24 characters maximum): **Air Sys Plt-Powerplant**

Contact hours per week: Lecture **3**   Lab   Field   Studio   Other

Earliest term course can be offered: **Fall**   Earliest academic year: **2012-13**

Intended semesters for offering this course: Fall ☐   J-Term ☐   Spring ☒   Summer ☐

Is this to be a general education course? **No**   If yes, which category?

Is this to be an experimental course? **No**   If yes, use the Intra-Departmental Curriculum Change Memo.

List all prerequisites for this course. If none, indicate by checking here: ☐

Course	Credit Hours	Course	Credit Hours
1.		2.	
3.		4.	
5.		6.	
7.		8.	
9.		10.	

List all co-requisites for this course. If none, indicate by checking here: ☐

Course	Credit Hours	Course	Credit Hours
1.		2.	
3.		4.	
5.		6.	
7.		8.	
9.		10.	

(Submit a course modification request, as required, for each course listed above.)

List all programs of study for which this course will be a requirement or a listed choice, including all degrees, majors, minors, certificates, concentrations, cognates, emphases, and options. If none, indicate by checking here: ☐

	Degree Type	Program
1.	**AAS**	**Aviation Technology- Helicopter**
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

(Submit a program modification request and a revised program sheet for each program listed above. All prerequisites to this course <u>must </u>be included in each program of study listed above.)

List all courses for which this course is to be a prerequisite or corequisite. If none, indicate by checking here: ☐

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.

(Submit a course modification request, as required, for each course listed above.)

DUPLICATION: Is there overlapping content with present courses offered on campus? **No**
    If yes, explain:

FACULTY FTE: Will additional faculty FTE be required? **Yes**
    If yes, explain: **Adjunct Aviation Technology Instructor- Helicopter will be hired**

EQUIPMENT: Does the course require additional equipment? **No**
    If yes, explain:

LAB FACILITIES: Does the course require additional lab facilities? **No**
    If yes, explain:

Course description as it will appear in the printed catalog:
    Introduction to the basic operating systems of aircraft powerplants to supplement instruction received in flight training.

In addition to providing all the above information, also do the following:

1. Discuss the proposal with all departments that might be affected by the proposal.

2. Prepare the following support documentation in an MS Word file:
        a. Justification for the proposed new course (in narrative form),
        b. Student learning objectives, and
        c. Topical course outline.

3. Submit the course description to the Curriculum Committee's catalog description reviewer.

4. Submit the above documentation to Library's Curriculum Committee representative.

5. Obtain departmental approval according to department-specific procedures.

6. Submit all documents to Academic Affairs via email to curriculum@coloradomesa.edu.

Refer to the Curriculum Committee's published deadlines for #3, 4, 5, and 6.

PROPOSED AND PREPARED BY:
Name: **William J. McCracken Jr.**   Date: **9/22/2011**

REVIEWED BY DEPARTMENT'S CURRICULUM COMMITTEE REPRESENTATIVE:
Name: **Gary Looft**   Date: **9/22/2011**

APPROVED BY DEPARTMENT HEAD:
Name: **Brigitte Sundermann**   Date: **9/22/2011**

Submit this form to Academic Affairs via email to curriculum@coloradomesa.edu.

Course: AVTN 141

Title: Aircraft Systems for Pilots – Powerplant

Credit Hours: 3 (45 contact hours)

Course Description: Introduction to the basic operating systems of aircraft powerplants to supplement instruction received in flight training.

COURSE OBJECTIVES: (STANDARD COMPETENCIES)
Upon successful completion of this course the student should be able to comprehend:

I.   Powerplant operation theory
II.   Powerplant fuel metering and turbo charging systems.
III.   Powerplant ignition systems.
IV.   Powerplant exhaust systems.
V.   Powerplant cooling systems.
VI.   Propeller systems.
VII.   Powerplant and propeller operation principles.
VIII.   Powerplant maintenance records.

TOPICAL OUTLINE:

I.   Describe the operational principles and basic maintenance procedures of aircraft turbine, turbo-propeller, and reciprocating powerplants. (I)
II.   Identify and describe the operating principles and basic maintenance procedures of aircraft fuel control systems. (II)
III.   Identify and describe the operating principles and basic maintenance procedures of aircraft ignitions systems. (III)
IV.   Identify and describe the operating principles and basic maintenance procedures of aircraft exhaust and heating systems. (IV)
V.   Identify and describe the operating principles and basic maintenance procedures of aircraft cooling systems. (V)
VI.   Identify and describe the operating principles and basic maintenance procedures of aircraft propeller systems. (VI)
VII.   Demonstrate proper powerplant run-up technique. (VII)
VIII.   Identify requirements for documentation of aircraft powerplant maintenance and properly document items of powerplant preventative maintenance. (VIII)

DEPARTMENT WORKSHEET FOR A COURSE ADDITION
Colorado Mesa University Curriculum Committees

NOTE: Each course addition must be submitted on a separate form.

Department Name: **Western Colorado Community College**
        If new department, please enter name:

Course prefix: **AVTN**   Course number: **242**   Credit hours: **1**

Course name: **ATC Phraseology II**

Course abbreviated catalog name (24 characters maximum): **ATC Phraseology II**

Contact hours per week: Lecture **1**   Lab   Field   Studio   Other

Earliest term course can be offered: **Fall**   Earliest academic year: **2012-13**

Intended semesters for offering this course: Fall ☐   J-Term ☐   Spring ☒   Summer ☐

Is this to be a <u>general education</u> course? **No**   If yes, which category?

Is this to be an experimental course? **No**   If yes, use the Intra-Departmental Curriculum Change Memo.

List all <u>prerequisites</u> for this course. If none, indicate by checking here: ☐

Course	Credit Hours	Course	Credit Hours
1.		2.	
3.		4.	
5.		6.	
7.		8.	
9.		10.	

List all <u>co-requisites</u> for this course. If none, indicate by checking here: ☐

Course	Credit Hours	Course	Credit Hours
1.		2.	
3.		4.	
5.		6.	
7.		8.	
9.		10.	

(Submit a course modification request, as required, for each course listed above.)

List all programs of study for which this course will be a <u>requirement</u> or a <u>listed choice</u>, including all degrees, majors, minors, certificates, concentrations, cognates, emphases, and options. If none, indicate by checking here: ☐

	Degree Type	Program
1.	**AAS**	**Aviation Technology- Helicopter**
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Course: AVTN 242

Title: ATC Phraseology II

Credit Hours: 1 (15 contact hours)

Course Description: Focus on the proper use of phraseology in the radar environment.

STANDARD COMPETENCIES:

I.   Participate in role-playing in order to demonstrate ability to effectively communicate in the radar environment
II.   Demonstrate an understanding of correct ATC phraseology and abbreviations as used in the radar environment

TOPICAL OUTLINE:

I.   Stage 1- Radio Communications
    A.   Radio Operations
    B.   Radio Operations Scenario
II.   Stage 2- Radio Communications (cont.)
    A.   Communications Phraseology
    B.   Communications Scenario
III.   Stage 3- Transfer of Radar Identification
    A.   Hand-Off Procedures Phraseology
    B.   Hand-Off Procedures Scenario
IV.   Stage 4- Transfer of Radar Identification (cont.)
    A.   Point Out Procedures Phraseology
    B.   Point Out Procedures Scenario
V.   Stage 5- ATC Communications Procedures
    A.   Clearance Phraseology
    B.   Clearance Scenario
VI.   Stage 6- ATC Communications Procedures (cont.)
    A.   Aircraft Identification Phraseology
    B.   Aircraft Identification Scenario
VII.   Stage 7- ATC Communications Procedures (cont.)
    A.   Phraseology for Destination Airport
    B.   Destination Airport Scenario
VIII. Stage 8- ATC Communications Procedures (cont.)
    A.   Departure Instructions
    B.   Departure Scenario
IX.   Stage 9- ATC Communications Procedures (cont.)
    A.   Phraseology for Route of Flight
    B.   Route of Flight Scenario
X   Stage 10- ATC Communications Procedures (cont.)
    A.   Altitude Assignment

(Submit a program modification request and a revised program sheet for each program listed above. All prerequisites to this course <u>must</u> be included in each program of study listed above.)

List all courses for which this course is to be a <u>prerequisite or corequisite.</u> If none, indicate by checking here: ☐

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.

(Submit a course modification request, as required, for each course listed above.)

DUPLICATION: Is there overlapping content with present courses offered on campus? **No**
   If yes, explain:

FACULTY FTE: Will additional faculty FTE be required? **Yes**
   If yes, explain: **Adjunct Aviation Technology Instructor- Helicopter will be hired**

EQUIPMENT: Does the course require additional equipment? **No**
   If yes, explain:

LAB FACILITIES: Does the course require additional lab facilities? **No**
   If yes, explain:

Course description as it will appear in the printed catalog:
   Focus on the proper use of phraseology in the radar environment.

In addition to providing all the above information, also do the following:

1. Discuss the proposal with all departments that might be affected by the proposal.

2. Prepare the following support documentation in an MS Word file:
    a. Justification for the proposed new course (in narrative form),
    b. Student learning objectives, and
    c. Topical course outline.

3. Submit the course description to the Curriculum Committee's catalog description reviewer.

4. Submit the above documentation to Library's Curriculum Committee representative.

5. Obtain departmental approval according to department-specific procedures.

6. Submit all documents to Academic Affairs via email to curriculum@coloradomesa.edu.

Refer to the Curriculum Committee's published deadlines for #3, 4, 5, and 6.

PROPOSED AND PREPARED BY:
Name: **William J. McCracken Jr.**   Date: **9/22/2011**

REVIEWED BY DEPARTMENT'S CURRICULUM COMMITTEE REPRESENTATIVE:
Name: **Gary Looft**   Date: **9/22/2011**

APPROVED BY DEPARTMENT HEAD:
Name: **Brigitte Sundermann**   Date: **9/22/2011**

Submit this form to Academic Affairs via email to curriculum@coloradomesa.edu.

Justification for Courses

The Aviation Technology courses were developed and numbered to meet the Colorado Common Course numbering system used by the Colorado Community College System. These courses will be taught by helicopter and fixed wing trainers from Colorado Flight Center and Suncrest Aviation located at Walker Field Airport in Grand Junction, CO.

The Aviation Technology course additions replicate courses developed and taught by the helicopter and fixed wing trainers from Colorado Flight Center and Suncrest Aviation and also offered at other Community Colleges in Colorado. These courses comprise a skill set needed for flight training and will allow pilots an opportunity to advance and certify in the aviation arena, and are based on a national model.

These courses and this degree will serve existing and prospective aviation personnel from throughout the western United States.

Justification for the Aviation Program

According to the FAA, the aviation industry is expected to more than double during the next twenty years, therefore there will be and is an increasing demand for pilots. There are many career opportunities for the professional pilot. Graduates have a wide variety of choices in the industry as companies are continually searching for qualified pilots. Below is a list of several opportunities for a career as a professional pilot.

- Helicopter Flight Instruction
- Air Medical Transport
- Aerial Photography
- Agricultural Spraying
- Executive Charter
- Scientific Study and Research
- Law Enforcement
- Sightseeing Tours
- Media - TV and Radio News
- Survey and Mapping

- Forestry
- Skydiving
- Heli- Skiing
- Movie Production
- Heavy Lift
- Search and Rescue
- Offshore Oil Support
- Pipeline and Power Line Patrol
- Fire Fighting
- Military

The FAA-Industry Training Standards (FITS) program is a partnership between FAA, industry, and academia designed to enhance general aviation safety. This is accomplished by developing flight training programs that are more convenient, more accessible, less expensive, and more relevant to today's users of the National Airspace System. The FITS program creates scenario-based, learner-focused training materials that encourage practical application of knowledge and skills. The goal is to help pilots of technically-advanced aircraft (TAAs) -- which have more automation and often greater performance capability -- develop the risk management skills and in-depth systems knowledge needed to safely operate and maximize the capability of these aircraft in the National Airspace System (NAS).

The Fixed-wing and Helicopter Programs developed for Western Colorado Community College incorporate all courses that are currently approved through the Colorado Community College System and reflect current programs that are offered across Colorado and the United States.

Library Curriculum Assessment
Tomlinson Library
Colorado Mesa University

The following form is a snapshot of the library's collection in support of new curriculum areas and/or course additions.

Date of assessment: 10/5/2011

Collection under review: Materials related to AVTN 108 GPS for Pilots, AVTN 115 ATC Phraseology I, and AVTN 242 ATC Phraseology II (Aviation Technology, Emphasis: Helicopter) and AVTN 223 Multi-engine Instructor Flight (Aviation Technology, Emphasis: Fixed-wing)

Program level (circle): **Certificate** **Associates** Bachelors Masters

Delivery mode: Demonstration and flight time instruction

Library Liaison: Aimee Brown

1. Current Collection Review
   a. Reference Sources:
   b. Monographic Sources:
      - Age Analysis of Monographic Collection
   c. Periodicals (online and paper)
   d. Electronic Resources:

2. Recommendations for additions to the collection:

The Library collection was assessed for materials on aviation in September of 2010. At that time it was recommended that the WCCC faculty select 6 new books and continue on an annual basis to select materials that support the curriculum of the Aviation program. It is recommended that 4-6 books be purchased in support of AVTN 108, AVTN 115, AVTN 242 and AVTN 223 and that these topics be included in the annual selection of library materials that support the curriculum of the Aviation program.

3. Analysis of library's collection:
   X Materials for this course can be purchased with existing funds
   ☐ This program requires no new library resources.
   ☐ Extra funding is required to adequately meet the informational needs of the program. Estimated resources needed $ _____

Library Director: ___Sarah Cron_____ Date: __Oct 7, 2011_____