Reedley College
Proposed Course Modification

Course # / Title **AERO 3/Aviation Maintenance Technology**

CHECK OFF SHEET

PRELIMINARY STEPS. Do before completing Course Modification Form.

(EACH BOX SHOULD BE CHECKED AS COMPLETED BEFORE SUBMISSION.)

☐ 1. Communicate with the Curriculum Chair regarding intent to modify an existing course outline (recommended, not required).

☐ 2. List term for implementation of modifications:
☐ Fall 2010 ☐ Spring _____ ☐ Summer _____

☐ 3. Check one:
Do not complete Fresno City College course alignment page if:
x No similar course or program at FCC.
_____ Course currently in common with FCC course or accepted in lieu of and changes will not affect status.

Complete Fresno City College course alignment page if:
_____ Course currently in common with FCC course or accepted in lieu of. Changes may affect status. Consult with counterparts at FCC and complete alignment page
_____ Course not in common or accepted in lieu of but may be with proposed changes consult with FCC counterparts

☐ 4. Changes sought in the following:

CSU General Education Code	Yes _____	No x
Transfer Baccalaureate List	Yes _____	No x

If yes to either, schedule an appointment with the Articulation Officer

☐ 5. Changes sought in number of repeats for credit:

_____ Yes
x No

If yes, secure a **Course Repetition** form from the Curriculum Office.

PROPOSED COURSE MODIFICATION FORM

☐ Appropriate sections of Course Outline of Record completed.

FINAL steps (Do after completing Course Outline of Record)

☐ 1. Signature Form. Secure signatures of the Department Chair and the Associate Dean before submitting the completed course proposal to the Curriculum Office.

☐ 2. Program Description. Course modification will change an existing program which is or will be described in the college catalogue.

_____ Yes x No

If yes, complete **Program Description Form** before submitting modification.

☐ 3. Final Check. All items above have been completed and checked off before modification is submitted.

Reedley College
PROPOSED COURSE MODIFICATION

All changes and modifications in the official course outline must come to the Curriculum Committee. Though minor changes may seem obvious, even these need to come to committee for information and to update the official curriculum. Changes in programs or in several department offerings should be submitted together if possible so that the whole picture is clear.

OUTLINE. Please fill in current existing course number, title, and units for course to be modified.

Department: Industrial Technology — Course No.: **AERO 3**

Course Title: Aviation Maintenance Technology — Units: **17.5**

Effective Date: **08/01/2010**

A. PROPOSED CHANGES.
(Indicate below all proposed changes to be made in the course outline.)

I. Cover Page

- ____ 1. Course ID
- ____ 2. Course Title
- ____ 3. Units
- ____ 4. Lecture/Lab Hours
- ____ 5. Grading Basis
- x 6. Entrance Skills: Basic Skills Prerequisites/Advisories
- x 7. Subject Prerequisites/Corequisites/Advisories
- ____ 8. Classification (Degree applicable, Non-degree applicable, or Pre-collegiate Basic skills)
- ____ 9. General Education Pattern, Graduation Requirement, and Major Category
- ____ 10. General Education Pattern/Baccalaureate (CSU)
- ____ 11. Repeatability
- x 12. Catalog Description

Other pages

- x II. Course Outcomes
- x III. Course Objectives
- x IV. Course Content Outline
- x V. Approved Readings
- x VI. Methods of Grading
- ____ VII. Levels of Educational Materials

Additional Pages (optional depending on course)

- ____ Request for Repeatability/Limitation on Enrollment

B. DESCRIPTION OF CHANGES AND MODIFICATIONS.

ITEM NO.	CHANGED FROM	CHANGED TO	REASON
6	Basic Skills Advisories:	Basic Skills Advisories: Eligibility for English 125, English 126, and Math 101	Students need these basic skills to succeed in the course
7	Subject Prerequisites (requires C grade or better): AERO 1, AERO 2	Subject Advisories: AERO 1, AERO 2	Remove Prerequisites from Aero 3 in order to balance enrollment between 1st year Aero courses (AERO 1 & AERO 2) and 2nd year Aero courses (AERO 3 & AERO 4) per Aero staff discretion
12..	Skills and knowledge appropriate to FAA Regulation Part 147 to include: Reciprocating Engines, Turbine Engines, Engine Inspection, Lubrication Systems, Ignition and Starting Systems, Induction Systems, Engine Cooling Systems, Engine Exhaust and Reverser Systems, Propellers, Auxiliary Power Units.	Aero 3 meets the FAA Powerplant requirements including: Reciprocating Engines, Turbine Engines, Engine Inspection, Lubrication Systems, Ignition and Starting Systems, Induction Systems, Engine Cooling Systems, Engine Exhaust and Reverser Systems, Propellers, Auxiliary Power Units. Successful completion of Aero 1, 2, 3 and 4 qualifies student to take the licensing exams required for Airframe and Powerplant certification.	Provide clarification to readers
II.	A. Meet the Federal Aviation Administration requirements for the majority of the "Powerplant" subjects as specified in the Approved Aviation Maintenance Technician School.	A. Meet the Federal Aviation Administration requirements for the majority of the turbine and reciprocating engine subjects as specified in the Approved Aviation Maintenance Technician	Clarification of outcome "A" and "C"

	B. Adhere to ethical and legal maintenance standards as prescribed in the Federal Aviation Administration, Federal Aviation Regulations. C. Given acceptable manufacturers documentation, complete assigned inspections, modifications, repairs, calculations, and/or troubleshooting procedures. D. Develop acceptable documentation for return to service certification of aircraft and/or related component parts. E. Work successfully in a team atmosphere, alternately assuming the roles of leader and of team player. F. Apply safety procedures in a shop environment and follow hazardous material handling procedures.	School. B. Recognize implication of ethical and legal maintenance standards as prescribed in the Federal Aviation Administration, Federal Aviation Regulations. C. Complete assigned inspections, modifications, repairs, calculations, and/or troubleshooting procedures, while determining if provided documentation is valid. D. Develop acceptable documentation for return to service certification of aircraft and/or related component parts. E. Work successfully in a team atmosphere, alternately assuming the roles of leader and of team player. F. Apply safety procedures in a shop environment and follow hazardous material handling procedures.	
III.	1. (2) Identify and select lubricants 2. (2) Repair engine lubrication systems components 3. (3) Inspect, check, service, troubleshoot, and repair engine lubrication systems 4. (1) Inspect, check, service and repair propeller synchronizing and ice control systems 5. (3) Identify and select propeller lubricants 6. (1) Balance propellers 7. (2) Repair propeller control system components 8. (3) Inspect, check , service and repair fixed-pitch propellers, constant speed propellers, feathering propellers, and propeller governing systems 9. (3) Install, troubleshoot, and remove propellers 10. (3) Repair aluminum alloy propeller blades 11. (1) Inspect and repair a radial engine 12. (2) Overhaul reciprocating engine 13. (3) Inspect, check, service, and repair reciprocating engines and engine installations 14. (3) Install, troubleshoot,	1. Identify and select lubricants (level 2) 2. Repair engine lubrication systems components (level 2) 3. Inspect, check, service, troubleshoot, and repair engine lubrication systems (Level 3) 4. Inspect, check, service and repair propeller synchronizing and ice control systems (level 1) 5. Identify and select propeller lubricants (Level 3) 6. Balance propellers (level 1) 7. Repair propeller control system components (level 2) 8. Inspect, check , service and repair fixed-pitch propellers, constant speed propellers, feathering propellers, and propeller governing systems (Level 3) 9. Install, troubleshoot, and remove propellers (Level 3) 10. Repair aluminum alloy propeller blades (Level 3) 11. Inspect and repair a radial engine (level 1) 12. Overhaul reciprocating engine (level 2) 13. Inspect, check, service, and repair reciprocating engines and engine	Clarification of FAA levels in objectives

	and remove reciprocating engines 15. (2) Overhaul turbine engine 16. (3) Inspect, check, service, and repair turbine engines and turbine engine installations 17. (3) Install, troubleshoot, and remove turbine engines 18. (2) Repair engine cooling system components 19. (3) Inspect, check, troubleshoot, service, and repair engine cooling systems 20. (1) Inspect, check, service, and repair heat exchangers and superchargers 21. (3) Inspect, check, service, and repair carburetor air intake and induction manifolds 22. (2) Repair engine exhaust system components 23. (3) Inspect, check, troubleshoot, service, and repair engine exhaust systems 24. (2) Inspect, service, troubleshoot, and repair reciprocating and turbine engine ignition systems and components 25. (1) Inspect, check, service, and repair turbine pneumatic starting systems	installations (Level 3) 14. Install, troubleshoot, and remove reciprocating engines (Level 3) 15. Overhaul turbine engine (level 2) 16. Inspect, check, service, and repair turbine engines and turbine engine installations (Level 3) 17. Install, troubleshoot, and remove turbine engines (Level 3) 18. Repair engine cooling system components (level 2) 19. Inspect, check, troubleshoot, service, and repair engine cooling systems (Level 3) 20. Inspect, check, service, and repair heat exchangers and superchargers (level 1) 21. Inspect, check, service, and repair carburetor air intake and induction manifolds (Level 3) 22. Repair engine exhaust system components (level 2) 23. Inspect, check, troubleshoot, service, and repair engine exhaust systems (Level 3) 24. Inspect, service, troubleshoot, and repair reciprocating and turbine engine ignition systems and components (level 2) 25. Inspect, check, service, and repair turbine pneumatic starting systems (level 1)	
IV.	A. Reciprocating Engines B. Turbine Engines C. Engine Inspection D. Lubrication Systems E. Ignition and Starting Systems F. Induction Systems G. Engine Cooling Systems H. Engine Exhaust and Reverser Systems I. Propellers J. Auxiliary Power Units	**<u>Lecture;</u>** A. Reciprocating Engines B. Turbine Engines C. Engine Inspection D. Lubrication Systems E. Ignition and Starting Systems F. Induction Systems G. Engine Cooling Systems H. Engine Exhaust and Reverser Systems I. Propellers J. Auxiliary Power Units **<u>Lab will give students the opportunity to apply concepts to practical applications</u>** A. Reciprocating Engines B. Turbine Engines C. Engine Inspection D. Lubrication Systems E. Ignition and Starting	Addition of Lab content outline

		Systems F. Induction Systems G. Engine Cooling Systems H. Engine Exhaust and Reverser Systems I. Propellers J. Auxiliary Power Units	
V.	A. Airframe and Powerplant Technician General Text Book, Jeppesen, 2004 B. Airframe and Powerplant Technician Airframe Textbook, Jeppesen, 2003 C. Airframe and Powerplant Technician Powerplant Textbook, Jeppesen, 2004 D. Aircraft Gas Turbine Powerplants, Jeppesen, 1977 E. Aircraft Inspection and Repair (AC-43.13-1B &2A, FAA, supplied by Jeppesen, 1998 F. Federal Aviation Regulations, Aviation Maintenance Technician, Jeppesen, 2003 G. Aviation Mechanic Handbook, Crane, 1992 H. Airframe and Powerplant Mechanic Powerplant Handbook (AC-65-12A), FAA, 1996 I. Dictionary of Aeronautical Terms, Crane, 1991 J. Computer-Based-Training hardware and software K. Aircraft and aircraft mock-up components L. Microfiche Library, ATP, 2006 M. CD library, various N. Hard-copy Service Manuals, Maintenance Manuals, Parts Manuals; various	A. Federal Aviation Regulations, Aviation Maintenance Technician, Jeppesen, 2010, ISBN# 0-88487-337-4 B. Airframe and Powerplant Technician General Text Book, Jeppesen, 2009 or equivalent, C. Airframe and Powerplant Technician Airframe Textbook, Jeppesen, 2009 or equivalent D. Airframe and Powerplant Technician Powerplant Textbook, Jeppesen, 2009 or equivalent E. Aircraft Inspection and Repair (AC-43.13-1B &2B, FAA, supplied by Jeppesen, 2008 or equivalent F. Dictionary of Aeronautical Terms, Crane, 2008 or equivalent G. Aviation Mechanic Handbook, Crane, 2006 or equivalent H. Aircraft Gas Turbine Powerplants, Jeppesen, 2002 or equivalent I. Computer-Based-Training hardware and software J. Aircraft and aircraft mock-up components K. Microfiche Library, ATP, 2008 L. CD library, various M. Hard-copy Service Manuals, Maintenance Manuals, Parts Manuals; various	Update of text publication dates
VI.	***A. Writing*** 1. Technical reports. 2. Complete aircraft discrepancy reports and maintenance forms and records. 3. Write discrepancy reports and maintenance records ***B. Problem Solving*** …1.What is the difference between a controllable	***A.Writing*** ***Required assignments may include but are not limited to the following:*** Discrepancy reports Laboratory reports Log Book entries **Sample student prompt;** Complete aircraft discrepancy reports and maintenance forms and records.	Simplification of methods to measure student achievement

	propeller and a constant-speed propeller? (5 pts) 2. What keeps a McCauley feathering propeller from feathering when the aircraft engine is shutdown, while the aircraft is on the ground? (2 pts) 3. What is meant by the beta range of operation of a turboprop propeller? (5 pts) 4. What type of device is used on propeller blades to remove ice that has formed on them? (1 pt) What components make up the above system? (5 pts) ***C. Skill demonstrations*** …5. When an aircraft maneuvers into an underspeed condition the properly operational propeller governor will do the following: (7 pts) speeder spring will: flyweight toe moves: pilot valve moves: prop moves from pitch, to ____ pitch engine RPM goes from ____ RPM, to RPM	***B. Problem Solving*** ***Required assignments may include, but are not limited to the following:*** Quizzes Lab reports Lab projects **Sample student prompt;** Trouble shoot inoperative magneto List parts needed to repair magneto to operating condition ***C. Skill demonstrations*** ***Required assignments may include, but are not limited to the following:*** Lab project Research project Exam **Sample Student Prompt;** Remove rock damage from propeller blade using propeller maintenance manual Determine if repair to propeller blade is airworthy	

(Additional sheets may be attached if necessary.)

C. **EXPLANATIONS.** If course modification results in changes in the program which will require use of the program description form, please give rationale.

Please attach the complete outline before modifications to this form. If only the first page of the outline is being modified, <u>also attach the new first page</u>. <u>If other pages of the outline are being modified, please attach the complete new outline</u>.

Reedley College

SIGNATURE FORM

Submission/Recommendation/Action

Course Department and Number: Industrial Technology/AERO 3

Course Title: Aviation Maintenance Technology

Effective Date: 08/01/2010

1. Submitted By: Keith Zielke **Date:** 01/20/2010

2. Reviewed by Department: _____ **Date:** _____
Department Chair's Signature
Attach department recommendation. (optional)

3. Received/Reviewed by Dean of Instruction: _____ **Date:** _____
Dean's Signature

4. Approved by Curriculum Committee on: _____
Date

_____ _____
Curriculum Committee Chair **Date**

_____ _____
Vice President of Instruction **Date**

5. Reviewed by Articulation Officer: _____ _____
Date:

CSU GE Code submitted for articulation: _____

CREDIT COURSE OUTLINE

I. COVER PAGE

(1)	(2)	(3)
Course ID: AERO 3	Course Title: Aviation Maintenance Technology	Units: 17.5

(4) Lecture / Lab Hours:			(8)Classification:	
Total Course Hours	Total Lec hours:	15	Degree applicable:	x
	Total Lab hours:	15	Non-degree applicable:	
Lec will generate _____ hour(s) outside work			Pre-collegiate basic skills:	
Lab will generate _____ hour(s) outside work.				
			(9)RC Fulfills AS/AA degree requirement: (area)	
(5)Grading Basis: Grading scale only		x	General education category:	
Pass/No Pass option			Major: Aeronautics	
Pass/No Pass only				
(6)Basic Skills Prerequisites:			(10)CSU: Baccalaureate:	x
			(11) Repeatable: (A course may be repeated three times)	0

Basic Skills Advisories: Eligibility for English 125, English 126, and Math 101	For Office Use Only			
	New		Mod	x
	Effective Date: 08/01/2010			
(7)Subject Prerequisites (requires C grade or better):	SAM Priority: C		DATATEL ID: 4997	
	Unit Code: 272040		TOPS Code: 0950.00	
	Reporting ID: 600992.00		Date Reporting ID Assigned	
Subject Corequisites:	Program Status:		Course LHE: 26.25	
Subject Advisories: AERO 1, AERO 2	Replaced by: Date:			

(12)Catalog Description:

Aero 3 meets the FAA Powerplant requirements including: Reciprocating Engines, Turbine Engines, Engine Inspection, Lubrication Systems, Ignition and Starting Systems, Induction Systems, Engine Cooling Systems, Engine Exhaust and Reverser Systems, Propellers, Auxiliary Power Units. Successful completion of Aero 1, 2, 3 and 4 qualifies student to take the licensing exams required for Airframe and Powerplant certification.

II. COURSE OUTCOMES:

(Specify the learning skills the student demonstrates through completing the course and link critical thinking skills to specific course content and objectives.)

Upon completion of this course, students will be able to:

A. Meet the Federal Aviation Administration requirements for the majority of the turbine and reciprocating engine subjects as specified in the Approved Aviation Maintenance Technician School.
B. Recognize implication of ethical and legal maintenance standards as prescribed in the Federal Aviation Administration, Federal Aviation Regulations.
C. Complete assigned inspections, modifications, repairs, calculations, and/or troubleshooting procedures, while determining if provided documentation is valid.
D. Develop acceptable documentation for return to service certification of aircraft and/or related component parts.
E. Work successfully in a team atmosphere, alternately assuming the roles of leader and of team player.
F. Apply safety procedures in a shop environment and follow hazardous material handling procedures.

III. COURSE OBJECTIVES:

(Specify major objectives in terms of the observable knowledge and/or skills to be attained.)
In the process of completing this course, students will:

1. Identify and select lubricants (level 2)
2. Repair engine lubrication systems components (level 2)
3. Inspect, check, service, troubleshoot, and repair engine lubrication systems (Level 3)
4. Inspect, check, service and repair propeller synchronizing and ice control systems (level 1)
5. Identify and select propeller lubricants (Level 3)
6. Balance propellers (level 1)
7. Repair propeller control system components (level 2)
8. Inspect, check , service and repair fixed-pitch propellers, constant speed propellers, feathering propellers, and propeller governing systems (Level 3)
9. Install, troubleshoot, and remove propellers (Level 3)
10. Repair aluminum alloy propeller blades (Level 3)
11. Inspect and repair a radial engine (level 1)
12. Overhaul reciprocating engine (level 2)
13. Inspect, check, service, and repair reciprocating engines and engine installations (Level 3)
14. Install, troubleshoot, and remove reciprocating engines (Level 3)
15. Overhaul turbine engine (level 2)
16. Inspect, check, service, and repair turbine engines and turbine engine installations (Level 3)
17. Install, troubleshoot, and remove turbine engines (Level 3)
18. Repair engine cooling system components (level 2)
19. Inspect, check, troubleshoot, service, and repair engine cooling systems (Level 3)
20. Inspect, check, service, and repair heat exchangers and superchargers (level 1)
21. Inspect, check, service, and repair carburetor air intake and induction manifolds (Level 3)
22. Repair engine exhaust system components (level 2)
23. Inspect, check, troubleshoot, service, and repair engine exhaust systems (Level 3)
24. Inspect, service, troubleshoot, and repair reciprocating and turbine engine ignition systems and components (level 2)
25. Inspect, check, service, and repair turbine pneumatic starting systems (level 1)

*Skill Levels (Federal Aviation Administration Format):

1. Knowledge/Skill Level 1 C requires comprehension of general principle, but no manipulative skill application.

2. Knowledge/Skill Level 2 C requires comprehension of general principles, limited practical application and development of limited manipulative skills to perform basic operations.

3. Knowledge/Skill Level 3 C requires comprehension of general principles, performance of practical application and development of manipulative skills to minimum airworthiness standards.

IV. COURSE CONTENT OUTLINE:

Lecture;

A. Reciprocating Engines
B. Turbine Engines
C. Engine Inspection
D. Lubrication Systems
E. Ignition and Starting Systems
F. Induction Systems
G. Engine Cooling Systems
H. Engine Exhaust and Reverser Systems
I. Propellers
J. Auxiliary Power Units

Lab will give students the opportunity to apply concepts to practical applications

A. Reciprocating Engines
B. Turbine Engines
C. Engine Inspection
D. Lubrication Systems
E. Ignition and Starting Systems
F. Induction Systems
G. Engine Cooling Systems
H. Engine Exhaust and Reverser Systems
I. Propellers
J. Auxiliary Power Units

Note: The Aero program courses are regulated by the Federal Aviation Administration to include approximately 50% lecture and 50% lab in all of the subjects.

V. APPROPRIATE READINGS

Reading assignments may include but are not limited to the following:

A. Federal Aviation Regulations, Aviation Maintenance Technician, Jeppesen, 2010 ISBN# 0-88487-337-4,
B. Airframe and Powerplant Technician General Text Book, Jeppesen, 2009 or equivalent
C. Airframe and Powerplant Technician Airframe Textbook, Jeppesen, 2009 or equivalent
D. Airframe and Powerplant Technician Powerplant Textbook, Jeppesen, 2009 or equivalent
E. Aircraft Inspection and Repair (AC-43.13-1B &2B, FAA, supplied by Jeppesen, 2008 or equivalent
F. Dictionary of Aeronautical Terms, Crane, 2008 or equivalent
G. Aviation Mechanic Handbook, Crane, 2006 or equivalent
H. Aircraft Gas Turbine Powerplants, Jeppesen, 2002 or equivalent
I. Computer-Based-Training hardware and software
J. Aircraft and aircraft mock-up components
K. Microfiche Library, ATP, 2008
L. CD library, various
M. Hard-copy Service Manuals, Maintenance Manuals, Parts Manuals; various

	Global or international materials or concepts are appropriately included in this course
	Multicultural materials and concepts are appropriately included in this course.

If either line is checked, write a paragraph indicating specifically how global/international and/or multicultural materials and concepts relate to content outline and/or readings.

VI. METHODS TO MEASURE STUDENT ACHIEVEMENT AND DETERMINE GRADES:

Students in this course will be graded in at least one of the following four categories. Please check those appropriate. A degree applicable course must have a minimum of one response in category A, B or C.

A. Writing *Check either 1 or 2 below*			
x	***1. Substantial writing assignments are required. Check the appropriate boxes below and provide a written description in the space provided.***		
	2. Substantial writing assignments are NOT required. If this box is checked leave this section blank. For degree applicable courses you must complete category B and/or C.		
	a. essay exam(s)		d. written homework
	b. term or other papers(s)		e. reading reports
x	c. laboratory reports		f. other (specify)

Required assignments may include but are not limited to the following:
Discrepancy reports
Laboratory reports
Log Book entries

Sample Student Prompt;
Complete aircraft discrepancy reports and maintenance forms and records.

B. Problem Solving 1. Computational or non-computational problem-solving demonstrations, including:			
x	a. exam(s)	x	d. laboratory reports
x	b. quizzes		e. field work
x	c. homework problems		f. other (specify)

Required assignments may include, but are not limited to the following:
Quizzes
Lab reports
Lab projects

Sample Student Prompt;

Trouble shoot inoperative magneto
List parts needed to repair magneto to operating condition

C. Skill demonstrations, including:			
x	a. class performance(s)	x	c. performance exam(s)
	b. field work	x	d. other (specify)

Required assignments may include, but are not limited to the following:
Lab project
Research project
Exam

Sample Student Prompt;
Remove rock damage from propeller blade using propeller maintenance manual
Determine if repair to propeller blade is airworthy

D. Objective examinations, including:			
x	a. multiple choice	x	d. completion
x	b. true/false	x	e. other (specify)
x	c. matching items		

COURSE GRADE DETERMINATION:
Description/Explanation: Based on the categories checked in A-D, it is the recommendation of the department that the instructor's grading methods fall within the following departmental guidelines; however, the final method of grading is still at the discretion of the individual instructor. The instructor's syllabus must reflect the criteria by which the student's grade has been determined. (A minimum of five (5) grades must be recorded on the final roster.)

If several methods to measure student achievement are used, indicate here the approximate weight or percentage each has in determining student final grades.

50% Written (3/4 objective test, ¼ short answer)
50% Lab Applications

FOR DEGREE APPLICABLE COURSES

Course ID: AERO 3 Course Title: Aviation Maintenance Technology

VII. EDUCATIONAL MATERIALS

For degree applicable courses, the adopted texts, as listed in the college bookstore, or instructor-prepared materials have been certified to contain college-level materials.

Validation Language Level (check where applicable):	College-Level Criteria Met	
	Yes	No
Textbook	x	
Reference materials	x	
Instructor-prepared materials	x	
Audio-visual materials	x	

Indicate method of evaluation:

Used readability formulae (grade level 10 or higher)	
Text is used in a college-level course	x
Used grading provided by publisher	
Other: (please explain; relate to Skills Levels)	

Computation Level (Eligible for MATH 101 level or higher where applicable)	x	
Content		
Breadth of ideas covered clearly meets college-level learning objectives of this course	x	
Presentation of content and/or exercises/projects:		
Requires a variety of problem-solving strategies including inductive and deductive reasoning.	x	
Requires independent thought and study	x	
Applies transferring knowledge and skills appropriately and efficiently to new situations or problems.	x	

List of Reading/Educational Materials

A. Federal Aviation Regulations, Aviation Maintenance Technician, Jeppesen, 2010, ISBN# 0-88487-337-4
B. Airframe and Powerplant Technician General Text Book, Jeppesen, 2009 or equivalent
C. Airframe and Powerplant Technician Airframe Textbook, Jeppesen, 2009 or equivalent
D. Airframe and Powerplant Technician Powerplant Textbook, Jeppesen, 2009 or equivalent
E. Aircraft Inspection and Repair (AC-43.13-1B &2B, FAA, supplied by Jeppesen, 2008 or equivalent
F. Dictionary of Aeronautical Terms, Crane, 2008 or equivalent
G. Aviation Mechanic Handbook, Crane, 2006 or equivalent
H. Aircraft Gas Turbine Powerplants, Jeppesen, 2002 or equivalent
I. Computer-Based-Training hardware and software
J. Aircraft and aircraft mock-up components
K. Microfiche Library, ATP, 2008
L. CD library, various
M. Hard-copy Service Manuals, Maintenance Manuals, Parts Manuals; various

Comments:

	This course requires special or additional library materials (list attached).
x	This course requires special facilities: Aero Lab

FORM A

TARGET COURSE **AERO 3** Aviation Maintenance Technology
Number Title

BASIC SKILLS ADVISORIES PAGE The skills listed are those needed for eligibility for English 125, 126, and Math 101. These skills are listed as the outcomes from English 252, 262, and Math 250. In the right hand column, list at least three major basic skills needed at the beginning of the target course and check off the corresponding basic skills listed at the left.

Math Skills (eligibility for Math 101) (as outcomes for Math 250) x Performing the four arithmetic operations on whole numbers, arithmetic fractions, and decimal fractions. x Making the conversions from arithmetic fractions to decimal fractions, from decimal fractions to percents, and then reversing the process. _____ Applying the concepts listed above to proportions, percents, simple interest, markup and discount. x Applying the operations of integers in solving simple equations. _____ Converting between the metric and English measurement systems	1. Perform the four arithmetic operations on whole numbers and fractions. 2. Convert fractions to decimals 3. Perform mathematical calculations
Reading Skills (eligibility for English 126) (as outcomes for English 262) x Using phonetic, structural, contextual, and dictionary skills to attack and understand words. _____ Applying word analysis skills to reading in context. x Using adequate basic functional vocabulary skills. x Using textbook study skills and outlining skills. _____ Using a full range of literal comprehension skills and basic analytical skills such as predicting, inferring, concluding, and evaluating.	1. Read college level textbooks. 2. Fulfill Federal Aviation Requirement to read, write, and speak the English language 3. Read lab job sheets
Writing Skills (eligibility for English 125) (as outcomes for English 252) x Writing complete English sentences and avoiding errors most of the time. x Using the conventions of English writing: capitalization, punctuation, spelling, etc. x Using verbs correctly in present, past, future, and present perfect tenses, and using the correct forms of common irregular verbs. _____ Expanding and developing basic sentence structure with appropriate modification. _____ Combining sentences using coordination, subordination, and phrases. _____ Expressing the writer's ideas in short personal papers utilizing the writing process in their development.	1. Complete aircraft discrepancy reports and maintenance forms and records. 2. Federal Aviation Requirement to read, write, and speak the English language. 3. Write discrepancy reports and maintenance records

Check the appropriate spaces.
x Eligibility for Math 101 is **advisory** for the target course.
x Eligibility for English 126 is **advisory** for the target course.
x Eligibility for English 125 is **advisory** for the target course.

If the reviewers determine that an advisory or advisories in Basic Skills are all that are necessary for success in the target course, stop here, provide the required signatures, and forward this form to the department chair, the appropriate associate dean, and the curriculum committee.

Content review completed by _____ Date _____

FORM B

TARGET COURSE **AERO 3** Aviation Maintenance Technology
Number Title

CONTENT REVIEW FOR ALL COURSES IN ADDITION TO BASIC SKILLS COURSES
List in Column 1 at least **three specific major concepts, skills, or kinds of knowledge that a student will learn in the pre- or corequisite or advisory course that are essential to the successful completion in the target course.** In Column 2, state why the skill in Column 1 is essential in relation to the content listed in the course outline of the target course.

COLUMN 1: Concepts, Skills, Kinds of Knowledge	**COLUMN 2**: Specifically how this is necessary in the target course
(List each prerequisite or advisory separately here. If you need more space, attach a second page B. Be sure to explain each course in Column 2.) **Name of prerequisite or advisory course:** AERO 1 Concepts, skills, etc. (List these.) Knowledge of Aviation Maintenance Technician privileges and limitations Knowledge of Federal Aviation Regulations Knowledge of licensers requirements for Aviation Maintenance Technician Ability to identify aviation hardware Ability to fabricate fluid lines and fittings	It is advised that the student follows the sequence of the course, but is not mandatory. Aero 1 particularly provides foundational information about the Aviation maintenance industry. The student will have a better understanding of the regulations and procedure presented in Aero 1, but will be able to gain this information as he or she progresses through Aero 2, 3 or 4.

If the courses listed in Column 1 are advisory, complete the information below and do not go on to the next page.

Advisory course(s): AERO 1

Content review completed by _____ _____
Signature(s) Date

Vice President of Instruction's Signature _____ _____
Date

Please forward this completed form to the Curriculum Committee.

FORM B

TARGET COURSE **AERO 3** Aviation Maintenance Technology
Number Title

CONTENT REVIEW FOR ALL COURSES IN ADDITION TO BASIC SKILLS COURSES
List in Column 1 at least **three specific major concepts, skills, or kinds of knowledge that a student will learn in the pre- or corequisite or advisory course that are essential to the successful completion in the target course.** In Column 2, state why the skill in Column 1 is essential in relation to the content listed in the course outline of the target course.

COLUMN 1: Concepts, Skills, Kinds of Knowledge	**COLUMN 2**: Specifically how this is necessary in the target course
(List each prerequisite or advisory separately here. If you need more space, attach a second page B. Be sure to explain each course in Column 2.) **Name of prerequisite or advisory course:** AERO 2 Concepts, skills, etc. (List these.) Knowledge of environmental systems effecting human physiology in flight Knowledge of fuel metering and fuel systems Knowledge of landing gear and hydraulic systems Knowledge of fire detection and extinguishing system	It is advised that the student follows the sequence of the course, but is not mandatory. Aero 2 particularly provides foundational information about the aircraft systems, helping the student to understand the basic concepts as he or she progresses through Aero 3 or 4.

If the courses listed in Column 1 are advisory, complete the information below and do not go on to the next page.

Advisory course(s): AERO 2

Content review completed by _____ _____
Signature(s) Date

Vice President of Instruction's Signature _____ _____
Date

Please forward this completed form to the Curriculum Committee.