Curriculum Committee Meeting Agenda

Voting Committee Members
Chair – Kristen Booth (Pre-College)
Vice Chair – Zip Krummel (Social Science)

Courtney Cunningham (ESL)	Katy Jablonski (Wr/FL/Eng)	Pam Morse (MTH)
P.K. Hoffman (Arts & Hum)	Ashley Mickels (CTE)	Mimi Pentz (Nurs/Hlth Occ)
Steve Holman (Inst Dean)	Emilie Miller (Science)	

Non-Voting Committee Members
Jarett Gilbert (VP Instructional Services)
Mary Martin (Student Services/Registrar)
Susan Lewis (Curriculum)

Support Staff
Gail Gilliland (Curriculum)

Guests
Mary Kramer, Todd Meislahn

October 22, 2020 3:30 pm – 5:00 pm
Zoom log-in: https://cgcc.zoom.us/j/93838429275
Meeting ID: 938 3842 9275; phone in: 1-253-215-8782

Business:

1. Approval of October 8 minutes [1]

Old Business

1. Action Item Update
    a. September 24 Action Items
        i. Susan will change the CCOG header under "Texts & Materials" and "Content" to read that "specified texts, videos, etc are suggested, not required." (In process. Header will have to be added to each CCOG individually, or IT will need to update the Course Node. Will first add individual entry on courses that currently have text and materials sections and/or texts/materials mentioned in their content sections.)
        ii. Susan will add note to the CCOG development template indicating outline or bullet form is required for description of content under each outcome. (done)
        iii. Katy will take the writing discussion to her department. [regarding possible revision to standard prerequisites] (??)
    b. October 8 Action Items
        i. Susan will include "Old Business" in the Curriculum Committee agenda. (done)
        ii. Todd Meislan will convene a meeting between the Business department and CAS instructors to get a broader idea of what would be most advantageous for the ASOT-Bus Core Requirements for Computer Application requirements. (??)
        iii. Steve will bring suspension information to share with the Curriculum Committee. (??)

Submissions

1. Mary Kramer (3:45 – 4:45 pm)
    - AMT 191 Aviation Maintenance: General 101 (New CTE Course) with Related Instruction
    - AMT 192 Aviation Maintenance: General 102 (New CTE Course) with Related Instruction
    - AMT 193 Aviation Maintenance: General 103 (New CTE Course) with Related Instruction
    - AMT 194 Aviation Maintenance: General 104 (New CTE Course)
    - AMT 194A Aviation Maintenance: General 104A (New CTE Course)
    - AMT 194B Aviation Maintenance: General 104B (New CTE Course)
    - AMT 195 Aviation Maintenance: General 105 (New CTE Course)
    - AMT 261 Aviation Maintenance: Airframe 1 (New CTE Course)
    - AMT 262 Aviation Maintenance: Airframe 2 (New CTE Course)
    - AMT 263 Aviation Maintenance: Airframe 3 (New CTE Course) with Related Instruction
    - AMT 264 Aviation Maintenance: Airframe 4 (New CTE Course)
    - AMT 271 Aviation Maintenance: Powerplant 1 (New CTE Course)
    - AMT 272 Aviation Maintenance: Powerplant 2 (New CTE Course)
    - AMT 273 Aviation Maintenance: Powerplant 3 (New CTE Course)
    - AMT 274 Aviation Maintenance: Powerplant 4 (New CTE Course)
    - AMT 281 Aviation Maintenance: Airframe Return to Service (New CTE Course)
    - AMT 282 Aviation Maintenance: Powerplant Return to Service (New CTE Course)
    - Aviation Maintenance Technology AAS (New Degree)
    - Aviation Maintenance Technology (New Certificate) with Related Instruction Template

Discussion Items:

1. Tentative item (dependent on progress toward Action Item ii for October 8): ASOT-BUS General Requirements [3, 4, 5] (4:45 – 4:55 pm) (Postponed)
2. Addition of MTH 110 Technical Math as a Computation standalone option for Related Instruction [6]

Next Meeting: November 5, 2020

Attachments: [1] October 8, 2020 minutes; [2] Submissions: 17 New CTE courses, 1 New Degree, 1 New Certificate; [3] ASOT-BUS catalog page; [4] ASOT-BUS Oregon guidelines; [5] CGCC General Degree/Certificate Requirements; [6] MTH 110 CCOG, [7] Approved Standalone Options for Related Instruction

Curriculum Committee Minutes
October 8, 2020
3:30 pm – 5:00 pm
Location: Due to State Social Distancing requirements, this meeting is held via Zoom

PRESENT

Voting Committee Members

Chair – Kristen Booth (Pre-College)
Vice Chair - Zip Krummel (Social Sci)
Courtney Cunningham (ESOL)
P.K. Hoffman (Arts & Hum)
Steve Holman (Inst Dean)
Ashley Mickels (CTE)
Emilie Miller (Science)
Pam Morse (MTH)
Mimi Pentz (Nurs/Hlth Occ)

Non-Voting Committee Members

Susan Lewis (Curriculum)
Jarett Gilbert (VP Instructional Services)
Mary Martin (Student Services)

Support Staff

Gail Gilliland

Guests

Todd Meislahn

ABSENT

Voting Committee Members

Non-Voting Committee Members

Item	Discussion	Action
Call to Order	Meeting called to order by Chair Kristen Booth at 3:30 pm	
Business		
Welcome new members – Courtney Cunningham ESOL representative	The Curriculum Committee welcomes new member Courtney Cunningham, representative of the ESOL department. Brief introductions follow.	
Approve September 24th minutes	Ashley would like the action item in the "Review of committee member responsibilities: Review of potentially confusing submission areas" changed from "text and materials" to "text and materials and content"	Motion: Ashley 2nd: P.K.

	3:35 Emilie arrives **Motion: Approve September 24, 2020 minutes with amendment** **Amendment: change action item from …"text and materials" to "text and materials and content"**	Action: 7 in favor – 0 Opposed – 1 abstentions
Old Business	The Curriculum Committee would like the agenda to include "Old Business". This would provide a section in the agenda to follow-up on action items found in the minutes from the previous meeting. Follow-up from 09.24.20 action items: • Gail sent Curriculum Committee meeting invitation to Steve • Jarett received information from peers regarding the Degree/Certificate Suspension Guidelines. The information was not what was needed. • Katy is absent. The Curriculum Committee would like to hear a report back from Katy's action item: "Appropriateness of current Gen Ed standard prerequisites…". Katy was to take the discussion to her department. Future agenda item. We will discuss Katy's report back at the next meeting. After reviewing future action items from the September 24 meeting, the Curriculum Committee discusses possible agenda items for upcoming meetings. • Should courses be reviewed more often. This might be in program review • Aviation Maintenance will be submitting 15 courses and certificate and degree. Possibly some imbedded instruction and related instruction Action Item: Susan will include "Old Business" in the Curriculum Committee agenda.	
Submissions		
1. None		
Discussion Items:		
1. ASOT-BUS General Requirements	Todd Meislahn and Susan present the ASOT-BUS general requirements. See agenda attachments See 2020-21 CGCC catalog ASOT Business Core Requirements Computer Applications: BA 131 – 4 credits or CAS 133 – 4 credits or	Motion: Kristen 2nd: P.K. Action: 7 in favor – 0 Opposed – 0 abstentions

	CAS 170 3 credits or CAS 270 3 credits Extensive discussion ensues regarding 8 credit requirement. BA 131 and CAS 133 are similar in content, and each are 4 credit courses. However, CAS 170 and 270 are 3 credits each, making it difficult to reach the 8 credit requirement. Can we change the 8 credits? If we do, we have to check what OR state requires. A lot of these requirements came from PCC. We assumed they were State requirements, but they are not; they are PCCs requirements. BA 131- Todd confirms that BA 131 does meet or provide a level of proficiency that is asked for by the State. It touches on all Microsoft programs, except Access. There is also information about computer history, hardware, software. CAS 170 and 270 teach Excel. Need to change BA 131 **OR** CAS 133; not both. BA 131 is good as it also addresses ethical decisions. Ethics are important. The government now requires when financial statements are issued the owners can be criminally charged. This has had an impact on fraud. Ethics need to permeate what is being taught. Todd does not know why both courses are listed in this degree. Todd would recommend BA 131 as it applies to business. The Curriculum Committee requests information about student enrollment numbers. BA 131 is taken by many. CAS 133 is heavily attended. Susan clarifies that the choice of BA 131 or CAS 133 provides more flexibility to the student moving from CAS to Business. The Core Requirements could be written as BA 131 OR CAS 133; and one of these others CAS 170 and CAS 270 (and list other course options). There is a digital presentation CAS 109 for 1 credit, or a 4 credit Database class CAS 140. This would be a great solution, per Todd. CAS 133 does not cover Access very much. CAS 140 does cover Access. The State does not require 8 credits. That is a CGCC requirement. It would be good to check with the Business consortium to make sure we are not missing anything. The option of revising CAS 170 and CAS 270 to a 4 credit class could be problematic. Impacts many degrees and certificates, adding credit. And, does the course need the additional credit.	

	The Curriculum Committee would like to have the Business department convene with the CAS instructors to have a broader idea of what would be best for the Business department. Todd is in agreement with this. Susan would like to see both CAS 133 and BA 131 kept, as they are both advantageous for the students. Suggested that the credit requirement could be changed to 7 rather than 8 credits. The Curriculum Committee is in agreement with this. **Motion:** to have the business department and CAS department come up with their suggestion and bring it back to Curriculum Committee Action Item : Todd will convene a meeting between the Business department and CAS instructors to get a broader idea of what would be most advantageous for the ASOT-Bus Core Requirements for Computer Application requirements	
Degree/certificate Suspension Guidelines – determining when and for what reasons a program may be suspended. • Enrollment trends • Cost/Benefit Analysis: expense vs intake, and program financial sustainability • Labor market realities (local, regional, national)	Susan reminds the Curriculum Committee that we have a process for suspension. We are looking for and needing to develop that place in the process that it says "department decides when program is to be suspended." Jarett's colleagues suggest a regular process to review the program every three years. Base any decision on enrollment and program numbers. Steve suggests program prioritization that is built into the Program Review. This is a three tiered process. Steven has a written process that he will be glad to share. Susan asks Steve to bring his information to share with the Curriculum Committee. Extensive discussion continues, including questions around: • How many years does the program have to build enrollment? (It is noted that the college needs to invest to increase enrollment.) • Potential cost/benefit analysis • Changes in labor market needs We need to know the tipping point for when to let a program go. Possibly we can work backward from the guidelines for building a new program. Steve provides the example of Computer Science at his previous college. When all issues were looked at they decided CIS was a better route and worked CS into CIS.	

	Looking at other courses/paths. You can say things in different ways are built into these programs. Stackablility. bridging to other programs. Ashley agrees that looking at the blending into other programs across the college would be a good path. Susan would like suggestions for how to proceed. Who should be involved in making these decisions. • Kristen suggests a check list would be advantageous. A list of 3-5. Then taken to a vote o Enrollment, sustainable, workforce need, lack of faculty in the suspension area. ▪ We already have this list. o Courtney suggests creating more of a rubric, rather than a check list and then take that to a vote. Questions regarding with what frequency we review courses and whether there is a list of courses not offered. Run/offer/enrollment data is available for review at any time. It would also be part of Program Review. Jarett wants to know if we are actively reviewing these courses that are not being offered on a regular basis. There are two areas under discussion: • class/course inactivation's • and program suspension. Lori Ufford tasked the committee with developing suspension guidelines. That is why it keeps coming back. Suspension guidelines aren't necessarily a decision made by the Curriculum Committee on its own. The committee could formulate a recommendation that could be presented to the Instructional Council and to the President's Council for input and added framing. Those proposing a "rubric" are asked if they can bring a super rough draft of what they have in mind. There is a feeling that there isn't enough yet to go on to create such a rubric. Action Item: Steve will bring suspension information from his previous colleges to share with the Curriculum Committee	
Meeting Adjourn: 5:02	Zip moves, P.K. 2nds	
Next Meeting: October 22, 2020		

CC date
CC decision
CC vote

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION				
Department:	CTE		Submitter name phone and email	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 191		Credits:	6
Course Title: (60 characters max, including spaces)	Aviation Maintenance: General 101		Transcript Title: (30 characters max, including spaces)	AM: General 101
May this course be repeated for credit?	☐ Yes ☒ No	For how many times?	Contact hours:	Lecture: Lec/lab: 132 Lab:
Is this course equivalent to another? They must have the same description, outcomes and credit.			☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	To be included in the new Aviation Maintenance Technology certificate and degree.			

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☐	☐
Audit in consultation with faculty	☒	☐

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☒ placement into: RD 90, WR 90 or higher	☐ placement into:		
course prefix & number: MTH 65 or equivalent placement test scores	☒ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Introduces aircraft cleaning, corrosion control, materials, and aircraft hardware. Covers the selection of appropriate cleaning chemicals and processes. Describes the identification, selection, and installation of aircraft hardware, fluid lines, and fittings. Examines the performance of aircraft processes such as heat treating and hardness testing. Prerequisites: MTH 60, placement into RD 90 and WR 90 or higher. Audit available.

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to:
	1. Identify and select aircraft materials used in performing aircraft cleaning and corrosion control, fluid line maintenance, and non-destructive inspection of ferrous and non-ferrous materials.
	2. Apply FAA acceptable methods, techniques, and practices during aircraft maintenance operations.
	3. Utilize appropriate non-destructive testing methods commonly employed in the aircraft industry.
	4. Apply math and physics principles in solving problems associated with aviation maintenance.
Outcomes assessment strategies:	Evaluations by exams, quizzes and lab work.

COURSE CONTENT, ACTIVITIES AND DESIGN

Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in "required activities" box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor.

Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Department required course activities (optional):	
Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	1. Identify and select aircraft materials used in performing aircraft cleaning and corrosion control, fluid line maintenance, and non-destructive inspection of ferrous and non-ferrous materials. • Identify appropriate cleaning materials, understanding their characteristics, use and effect • Inspect, identify, remove, and treat aircraft corrosion and perform aircraft cleaning • Inspect and check welds • Fabricate and install rigid and flexible fluid lines and fittings • Identify and select appropriate nondestructive testing methods

	2. Apply FAA acceptable methods, techniques, and practices during maintenance operations. • Select and install aircraft hardware using appropriate power tools and shop equipment • Perform basic heat treating processes • Perform precision measurements • Determine correct torque valve for aircraft nuts and bolts • Identify characteristics of materials that affect its ability to be hammered, rolled or pressed 3. Utilize appropriate non-destructive testing methods commonly employed in the aircraft industry. • Perform dye penetrant, eddy current, ultrasonic and magnetic particle inspections • Identify procedures used in demagnetizing steel parts • Identify heat-treated and non-heat-treated aluminum alloys • Perform magnetic particle inspection methods on engine crankshaft • Identify the effects of heat treatment on aluminum alloy corrosion resistance 4. Apply math and physics principles in solving problems associated with aviation maintenance. • Apply the principles of physics as it relates to sound, fluid and heat dynamics, aircraft structures, and basic aerodynamics • Calculate measurements and fluid mixing ratios • Read and interpret a Vernier micrometer scale • Identify effect of atmospheric temperature and humidity on airfoil lift • Understand the relationship between pressure, volume and temperature on an air mass
Suggested Texts & Materials (specify if any texts or materials are required):	Aviation Maintenance Technician Handbook, Federal Aviation Administration; Introduction to Aircraft Maintenance, 3rd Edition, Avotek
Department Notes (optional)	

SECTION #2 FUNCTION OF COURSE WITHIN EXISTING AND/OR NEW PROGRAM(S)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☐ Yes ☒ No
Name of certificate(s):		# credit:
Name of degree(s):		# credit:
Will this new course be part of a new, proposed CGCC certificate or degree?		☒ Yes ☐ No
Name of new certificate(s):	Aviation Maintenance Technology	# credit: 96
Name of new degree(s):	Aviation Maintenance Technology AAS	# credit: 104

Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course
Is this course used to supply related instruction for a certificate?	☒ Yes ☐ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.	

SECTION #3 ADDITIONAL INFORMATION FOR NEW CTE COURSES	
Transferability: Will this course transfer to another academic institution? Identify and describe the nature of the transfer.	CTE elective Comparable at Lane Community College
IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	No
Is there any potential impact on another department? Identify and consult with Department chairs whose courses may be impacted by this course, such as: content overlap, course duplication, prerequisite need, enrollment increase or decrease, etc.	☐ Yes ☒ No
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: 10/09/2020 ☐ No
Implementation term:	☒ Start of next academic year (summer term) ☐ Specific term (if BEFORE next academic year):
Course approval is dependent on approval of the related certificate/degree submission which documents the placement of the new course. Degree/certificate status will impact the speed of the process. The Curriculum Office will notify the submitter, department chair, and department director when the course has completed the approval process and is available to be scheduled. Curriculum changes generally go into effect at the beginning of the next academic year (summer term). Mid-year revisions/additions are discouraged but accommodated when possible if there is a specific, identifiable need.	

SECTION #4 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."		
Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	08-22-2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or HST 104). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu.
2. Refer to the curriculum office website for the Curriculum Committee meeting schedule and submission deadlines. You are encouraged to send submissions prior to the deadline so that the curriculum office may review and provide feedback.
3. Course submissions will be placed on the next agenda with available time slots. You will be notified of your submission's time for review, and you will be sent a signature page that may be completed electronically or manually by your department chair and department dean. It is the submitter's responsibility to ensure that completed signature pages are delivered to the Curriculum Office the day before the Curriculum Committee meeting for which the submission is scheduled. Submissions without signed signature pages will be postponed.
4. It is not mandatory that you attend the Curriculum Committee meeting in which your submission is scheduled for review; however, it is strongly encouraged that you attend so that you may represent your submission and respond to any committee questions. Unanswered questions may result in a submission being rescheduled for further clarification.

Columbia Gorge Community College

Embedded Related Instruction

SECTION #1 GENERAL INFORMATION			
Department:	CTE	Submitter name: Phone: Email:	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 191	Course Title	Aviation Maintenance: General 101
Credits:	6		

SECTION #2 DETAILS OF RELATED INSTRUCTION		
Identify the number of hours and the course activities in the areas of: 1) computation, 2) communication and 3) human relations. Please be specific regarding the nature of the activities and instruction. Related instruction must be identified/apparent within a course outcome.		
Computation	Hours of instruction (include study and/or practice in and out of the classroom, 30 hours per credit):	31.5
Course Outcome: Copy from the CCOG the outcome(s) which is(are) associated with computation.		
2. Apply FAA acceptable methods, techniques, and practices during maintenance operations. 4. Apply math and physics principles in solving problems associated with aviation maintenance.		
Content (Activities, Skills, Concepts, etc.): provide details, including specific number of RI hours for each activity.		
• Perform precision measurements (RI hours 4.5) • Apply the principles of physics as it relates to sound, fluid and heat dynamics, aircraft structures, and basic aerodynamics (RI hours 6) • Calculate measurements and fluid mixing ratios (RI hours 6) • Read and interpret a Vernier micrometer scale (RI hours 6) • Identify effect of atmospheric temperature and humidity on airfoil lift (RI hours 4.5) • Understand the relationship between pressure, volume and temperature on an air mass (RI hours 4.5)		
Communication	Hours of instruction (include study and/or practice in and out of the classroom 30 hours per credit):	N/A
Course Outcome: Copy from the CCOG the outcome(s) which is(are) associated with communication.		
Content (Activities, Skills, Concepts, etc.): provide details, including specific number of RI hours for each activity.		

Human Relations	Hours of instruction (include study and/or practice in and out of the classroom 30 hours per credit):	N/A
Course Outcome: Copy from the CCOG the outcome(s) which is(are) associated with human relations.		
Content (Activities, Skills, Concepts, etc.): provide details, including specific number of RI hours for each activity.		

SECTION #3 INSTRUCTOR QUALIFICATIONS	
Instructors qualified to teach related instruction in **computation, communication, and/or human relations** will have the following acceptable subject area skills, education or training. Provide details.	
Identify area(s) of related instruction	Clearly identify qualifications instructors must have to teach EACH area as identified above
☒ Computation	Current Aircraft and Powerplant mechanic certifications
☐ Communication	
☐ Human Relations	

SECTION #4 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."		
Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	10/20/2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

NEXT STEPS:

1. Save this document as the course prefix and number followed by .RI (e.g. MA 117.RI or RET 112.RI). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu along with the affiliated New Course or Course Revision form.
2. Refer to the curriculum office website for the Curriculum Committee meeting schedule and submission deadlines. You are encouraged to send submissions prior to the deadline so that the curriculum office may review and provide feedback.
3. Course submissions will be placed on the next agenda with available time slots. You will be notified of your submission's time for review, and you will be sent a signature page that may be completed electronically or manually by your department chair and department dean. It is the submitter's responsibility to ensure that completed signature pages are delivered to the Curriculum Office the day before the Curriculum Committee

CC date
CC decision
CC vote

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION				
Department:	CTE		Submitter name phone and email	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 192		Credits:	6
Course Title: (60 characters max, including spaces)	Aviation Maintenance: General 102		Transcript Title: (30 characters max, including spaces)	AM: General 102
May this course be repeated for credit?	☐ Yes ☒ No	For how many times?	Contact hours:	Lecture: Lec/lab: 132 Lab:
Is this course equivalent to another? They must have the same description, outcomes and credit.			☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	To be included in the new Aviation Maintenance Technology certificate and degree.			

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☐	☐
Audit in consultation with faculty	☒	☐

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number: AMT 191	☒ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Examines the government's involvement in aviation maintenance, and FAA regulations regarding aviation maintenance and approved training programs. Emphasizes the use of maintenance publications, maintenance forms and records, and technicians' privileges and limitations. Addresses aircraft weight and balance procedures and associated record keeping, aircraft drawings and ground operations and servicing. Prerequisite: AMT 191. Audit available.	
LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)	
Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to: 1. Use aircraft drawings and other graphic information in performing aircraft maintenance and alterations. 2. Perform a complete aircraft weight and balance procedure, including preparation of required documentation and records. 3. Identify typical ground operation hazards when moving, securing and servicing aircraft. 4. Demonstrate ability to read, comprehend and apply information contained in FAA and manufacturer's aircraft specifications and other airworthiness directives and advisory materials. 5. Identify and implement aircraft requirements for safe starting, ground operation and movement, servicing and securing.
Outcomes assessment strategies:	Evaluations by exams, quizzes and lab work.
COURSE CONTENT, ACTIVITIES AND DESIGN	
Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in "required activities" box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor. Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.	
Department required course activities (optional):	
Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	1. Use aircraft drawings and other graphic information in performing aircraft maintenance and alterations. • Identify aircraft drawings, symbols and system schematics • Draw sketches of repairs and alterations • Utilize blueprint information • Understand graphs and charts

	2. Perform a complete aircraft weight and balance procedure, including preparation of required documentation and records. • Use aircraft specifications for weighting purposes • Perform complete weight and balance check and record data. • Determine the forward and rearward C.G. limit on a specified aircraft • Calculate the maximum cargo or baggage weight an aircraft can carry • Locate information to compute weight and balance 3. Identify typical ground operation hazards when moving, securing and servicing aircraft. • Start, operate, move and secure aircraft • Identify ground operation hazards • Identify and select appropriate fuels • Apply procedures for extinguishing fires in induction systems • Operate external ground power units and hydraulic units 4. Demonstrate ability to read, comprehend and apply information contained in FAA and manufacturer's aircraft specifications and other airworthiness directives and advisory materials. • Find specified information in technical reports and manuals • Identify purpose and applicability of Technical Standard Orders • Identify useful load and empty weight using data and specifications • Define "overhaul", "repair", "service" and "inspect" as it relates to aircraft maintenance 5. Identify and implement aircraft requirements for safe starting, ground operation and movement, servicing and securing. • Protect fuel systems from contamination • Tie down and secure aircraft • Apply procedures for extinguishing fires in induction systems • Use hand signals to direct aircraft movement
Suggested Texts & Materials (specify if any texts or materials are required):	Aviation Maintenance Technician Handbook, Federal Aviation Administration; Introduction to Aircraft Maintenance, 3rd Edition, Avotek
Department Notes (optional)	

SECTION #2 FUNCTION OF COURSE WITHIN EXISTING AND/OR NEW PROGRAM(S)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☐ Yes ☒ No
Name of certificate(s):		# credit:
Name of degree(s):		# credit:

Will this new course be part of a new, proposed CGCC certificate or degree?		☒ Yes ☐ No
Name of new certificate(s):	Aviation Maintenance Technology	# credit: 96
Name of new degree(s):	Aviation Maintenance Technology AAS	# credit: 104
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	
Is this course used to supply related instruction for a certificate?		☒ Yes ☐ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.		

SECTION #3 ADDITIONAL INFORMATION FOR NEW CTE COURSES	
Transferability: Will this course transfer to another academic institution? Identify and describe the nature of the transfer.	CTE elective Comparable at Lane Community College
IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	No
Is there any potential impact on another department? Identify and consult with Department chairs whose courses may be impacted by this course, such as: content overlap, course duplication, prerequisite need, enrollment increase or decrease, etc.	☐ Yes ☒ No
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: 10/09/2020 ☐ No
Implementation term:	☒ Start of next academic year (summer term) ☐ Specific term (if BEFORE next academic year):

Course approval is dependent on approval of the related certificate/degree submission which documents the placement of the new course. Degree/certificate status will impact the speed of the process. The Curriculum Office will notify the submitter, department chair, and department director when the course has completed the approval process and is available to be scheduled. Curriculum changes generally go into effect at the beginning of the next academic year (summer term). Mid-year revisions/additions are discouraged but accommodated when possible if there is a specific, identifiable need.

SECTION #4 DEPARTMENT REVIEW

"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."

Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	08-22-2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or HST 104). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu.
2. Refer to the curriculum office website for the Curriculum Committee meeting schedule and submission deadlines. You are encouraged to send submissions prior to the deadline so that the curriculum office may review and provide feedback.
3. Course submissions will be placed on the next agenda with available time slots. You will be notified of your submission's time for review, and you will be sent a signature page that may be completed electronically or manually by your department chair and department dean. It is the submitter's responsibility to ensure that completed signature pages are delivered to the Curriculum Office the day before the Curriculum Committee meeting for which the submission is scheduled. Submissions without signed signature pages will be postponed.
4. It is not mandatory that you attend the Curriculum Committee meeting in which your submission is scheduled for review; however, it is strongly encouraged that you attend so that you may represent your submission and respond to any committee questions. Unanswered questions may result in a submission being rescheduled for further clarification.

Columbia Gorge Community College

Embedded Related Instruction

SECTION #1 GENERAL INFORMATION			
Department:	CTE	Submitter name: Phone: Email:	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 192	Course Title	Aviation Maintenance: General 102
Credits:	6		

SECTION #2 DETAILS OF RELATED INSTRUCTION		
Identify the number of hours and the course activities in the areas of: 1) computation, 2) communication and 3) human relations. Please be specific regarding the nature of the activities and instruction. Related instruction must be identified/apparent within a course outcome.		
Computation	Hours of instruction (include study and/or practice in and out of the classroom, 30 hours per credit):	21
Course Outcome: Copy from the CCOG the outcome(s) which is(are) associated with computation.		
1. Use aircraft drawings and other graphic information in performing aircraft maintenance and alterations. 2. Perform a complete aircraft weight and balance procedure, including preparation of required documentation and records.		
Content (Activities, Skills, Concepts, etc.): provide details, including specific number of RI hours for each activity.		
• Understand graphs and charts (RI hours 4.5) • Perform complete weight and balance check and record data (RI hours 6) • Determine the forward and rearward C.G. (center of gravity) limit on a specified aircraft (RI hours 6) • Calculate the maximum cargo or baggage weight an aircraft can carry (RI hours 4.5)		
Communication	Hours of instruction (include study and/or practice in and out of the classroom 30 hours per credit):	N/A
Course Outcome: Copy from the CCOG the outcome(s) which is(are) associated with communication.		
Content (Activities, Skills, Concepts, etc.): provide details, including specific number of RI hours for each activity.		
Human Relations	Hours of instruction (include study and/or practice in and out of the classroom 30 hours per credit):	N/A
Course Outcome: Copy from the CCOG the outcome(s) which is(are) associated with human relations.		

Content (Activities, Skills, Concepts, etc.): provide details, including specific number of RI hours for each activity.

SECTION #3 INSTRUCTOR QUALIFICATIONS	
Instructors qualified to teach related instruction in **computation, communication, and/or human relations** will have the following acceptable subject area skills, education or training. Provide details.	
Identify area(s) of related instruction	Clearly identify qualifications instructors must have to teach EACH area as identified above
☒ Computation	Current Aircraft and Powerplant mechanic certifications
☐ Communication	
☐ Human Relations	

SECTION #4 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."		
Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	10/20/2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

NEXT STEPS:

1. Save this document as the course prefix and number followed by .RI (e.g. MA 117.RI or RET 112.RI). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu along with the affiliated New Course or Course Revision form.
2. Refer to the curriculum office website for the Curriculum Committee meeting schedule and submission deadlines. You are encouraged to send submissions prior to the deadline so that the curriculum office may review and provide feedback.
3. Course submissions will be placed on the next agenda with available time slots. You will be notified of your submission's time for review, and you will be sent a signature page that may be completed electronically or manually by your department chair and department dean. It is the submitter's responsibility to ensure that completed signature pages are delivered to the Curriculum Office the day before the Curriculum Committee meeting for which the submission is scheduled. Submissions without signed signature pages will be postponed.

CC date
CC decision
CC vote

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION				
Department:	CTE		Submitter name phone and email	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 193		Credits:	6
Course Title: (60 characters max, including spaces)	Aviation Maintenance: General 103		Transcript Title: (30 characters max, including spaces)	AM: General 103
May this course be repeated for credit?	☐ Yes ☒ No	For how many times?	Contact hours:	Lecture: Lec/lab: 132 Lab:
Is this course equivalent to another? They must have the same description, outcomes and credit.			☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	To be included in the new Aviation Maintenance Technology certificate and degree.			

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☐	☐
Audit in consultation with faculty	☒	☐

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number: AMT 192	☒ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Examines the theory and application of basic DC and AC electrical concepts, definitions, and laws. Introduces passive electrical components, electrical sources, schematic symbols, and electrical wiring diagrams. Explains the methods of safe and accurate measurement of DC and AC electrical quantities using basic electrical test equipment. Provides troubleshooting defective components, observing the characteristics of electrical components in test circuits, and wiring circuits from schematic diagrams. Prerequisites: AMT 192. Audit available.

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to:
	1. Apply electrical theory to aircraft systems and components.
	2. Identify and apply the factors affecting voltage, resistance and current to aircraft electrical circuits.
	3. Measure and calculate electrical power.
	4. Identify electrical components and interpret wiring diagrams.
	5. Demonstrate electrical testing and monitoring instruments for aircraft electrical circuits.
	6. Calculate and measure capacitance and inductance.
Outcomes assessment strategies:	Evaluations by exams, quizzes and lab work.

COURSE CONTENT, ACTIVITIES AND DESIGN

Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in "required activities" box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor.

Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Department required course activities (optional):	
Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	1. Apply electrical theory to aircraft systems and components. • Determine the basic operating principles of AC and DC electrical instruments and galvanometer • Understand the meaning of the mathematical prefixes used with electrical quantities • Identify and use common electrical symbols during the analysis of basic electrical circuits • Determine power requirements of a circuit when voltage and resistance are known

	2. Identify and apply the factors affecting voltage, resistance and current to aircraft electrical circuits. • Use an ohmmeter to check continuity and shorted circuits • Determine power requirements of a circuit when voltage and resistance are known • The factors that affect the voltage drop in an electrical conductor • Identify the factors that affect the voltage drop in an electrical conductor 3. Measure and calculate electrical power. • Determine the power furnished by a generator to an electrical system • Calculate Ohms Law problems for current, voltage, resistance and voltage drop in series, parallel and complex circuits • Determine the power requirements of an electrical motor at a specified efficiency and load • The relationship of power and phase in AC circuits 4. Identify electrical components and interpret wiring diagrams. • Trace electrical circuits using circuit diagrams • Identify electrical circuits and symbols using wiring diagrams • Understand the function of resistors, thermistors, thermocouples, switches, circuit protection and Wheatstone bridges 5. Demonstrate electrical testing and monitoring instruments for aircraft electrical circuits. • Connect voltmeters and ammeters into electrical circuits. • Determine the purpose of a shunt resistor when used with an ammeter. • Describe the effects of connecting cells in series or parallel • Determine the power the power furnished by a generator to an electrical system • Identify the power requirements of an electrical motor at a specific efficiency and load 6. Calculate and measure capacitance and inductance. • The effect of capacitive and inductive reactance in an electrical circuit • The cause, effect and prevention of counter-EMF • The interrelationship of capacitive and inductive reactance for high/low frequency filtration and frequency resonance • The relationship of total impedance to an AC electrical circuit
Suggested Texts & Materials (specify if any texts or materials are required):	Aviation Maintenance Technician Handbook, Federal Aviation Administration; Introduction to Aircraft Maintenance, 3rd Edition, Avotek
Department Notes (optional)	

SECTION #2 FUNCTION OF COURSE WITHIN EXISTING AND/OR NEW PROGRAM(S)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☐ Yes ☒ No
Name of certificate(s):		# credit:
Name of degree(s):		# credit:
Will this new course be part of a new, proposed CGCC certificate or degree?		☒ Yes ☐ No
Name of new certificate(s):	Aviation Maintenance Technology	# credit: 96
Name of new degree(s):	Aviation Maintenance Technology AAS	# credit: 104
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	
Is this course used to supply related instruction for a certificate?		☒ Yes ☐ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.		

SECTION #3 ADDITIONAL INFORMATION FOR NEW CTE COURSES	
Transferability: Will this course transfer to another academic institution? Identify and describe the nature of the transfer.	CTE elective Comparable at Lane Community College
IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	No
Is there any potential impact on another department? Identify and consult with Department chairs whose courses may be impacted by this course, such as: content overlap, course duplication, prerequisite need, enrollment increase or decrease, etc.	☐ Yes ☒ No
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	

Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: 10/09/2020 ☐ No
Implementation term:	☒ Start of next academic year (summer term) ☐ Specific term (if BEFORE next academic year):
Course approval is dependent on approval of the related certificate/degree submission which documents the placement of the new course. Degree/certificate status will impact the speed of the process. The Curriculum Office will notify the submitter, department chair, and department director when the course has completed the approval process and is available to be scheduled. Curriculum changes generally go into effect at the beginning of the next academic year (summer term). Mid-year revisions/additions are discouraged but accommodated when possible if there is a specific, identifiable need.	

SECTION #4 DEPARTMENT REVIEW

"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."

Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	08-22-2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or HST 104). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu.
2. Refer to the curriculum office website for the Curriculum Committee meeting schedule and submission deadlines. You are encouraged to send submissions prior to the deadline so that the curriculum office may review and provide feedback.
3. Course submissions will be placed on the next agenda with available time slots. You will be notified of your submission's time for review, and you will be sent a signature page that may be completed electronically or manually by your department chair and department dean. It is the submitter's responsibility to ensure that completed signature pages are delivered to the Curriculum Office the day before the Curriculum Committee meeting for which the submission is scheduled. Submissions without signed signature pages will be postponed.
4. It is not mandatory that you attend the Curriculum Committee meeting in which your submission is scheduled for review; however, it is strongly encouraged that you attend so that you may represent your submission and respond to any committee questions. Unanswered questions may result in a submission being rescheduled for further clarification.

Columbia Gorge Community College

Embedded Related Instruction

SECTION #1 GENERAL INFORMATION			
Department:	CTE	Submitter name: Phone: Email:	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 193	Course Title	Aviation Maintenance: General 103
Credits:	6		

SECTION #2 DETAILS OF RELATED INSTRUCTION		
Identify the number of hours and the course activities in the areas of: 1) computation, 2) communication and 3) human relations. Please be specific regarding the nature of the activities and instruction. Related instruction must be identified/apparent within a course outcome.		
Computation	Hours of instruction (include study and/or practice in and out of the classroom, 30 hours per credit):	48

Course Outcome: Copy from the CCOG the outcome(s) which is(are) associated with computation.

1. Apply electrical theory to aircraft systems and components.
2. Identify and apply the factors affecting voltage, resistance and current to aircraft electrical circuits.
3. Measure and calculate electrical power.
6. Calculate and measure capacitance and inductance.

Content (Activities, Skills, Concepts, etc.): provide details, including specific number of RI hours for each activity.

- Understand the meaning of the mathematical prefixes used with electrical quantities (RI hours 4.5)
- Determine power requirements of a circuit when voltage and resistance are known (RI hours 4.5)
- Determine the power furnished by a generator to an electrical system (RI hours 6)
- Calculate Ohms Law problems for current, voltage, resistance and voltage drop in series, parallel and complex circuits (RI hours 7.5)
- Determine the power requirements of an electrical motor at a specified efficiency and load (RI hours 6)
- The effect of capacitive and inductive reactance in an electrical circuit (RI hours 7.5)
- The interrelationship of capacitive and inductive reactance for high/low frequency filtration and frequency resonance (RI hours 7.5)
- The relationship of total impedance to an AC electrical circuit (RI hours 4.5)

Communication	Hours of instruction (include study and/or practice in and out of the classroom 30 hours per credit):	N/A

Course Outcome: Copy from the CCOG the outcome(s) which is(are) associated with communication.

Content (Activities, Skills, Concepts, etc.): provide details, including specific number of RI hours for each

activity.		
Human Relations	Hours of instruction (include study and/or practice in and out of the classroom 30 hours per credit):	N/A
Course Outcome: Copy from the CCOG the outcome(s) which is(are) associated with human relations.		
Content (Activities, Skills, Concepts, etc.): provide details, including specific number of RI hours for each activity.		

SECTION #3 INSTRUCTOR QUALIFICATIONS	
Instructors qualified to teach related instruction in **computation, communication, and/or human relations** will have the following acceptable subject area skills, education or training. Provide details.	
Identify area(s) of related instruction	Clearly identify qualifications instructors must have to teach EACH area as identified above
☒ Computation	Current Aircraft and Powerplant mechanic certifications
☐ Communication	
☐ Human Relations	

SECTION #4 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."		
Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	10/20/2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

NEXT STEPS:

1. Save this document as the course prefix and number followed by .RI (e.g. MA 117.RI or RET 112.RI). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu along with the affiliated New Course or Course Revision form.

CC date
CC decision
CC vote

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION				
Department:	CTE		Submitter name phone and email	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 194		Credits:	6
Course Title: (60 characters max, including spaces)	Aviation Maintenance: General 104		Transcript Title: (30 characters max, including spaces)	AM: General 104
May this course be repeated for credit?	☐ Yes ☒ No	For how many times?	Contact hours:	Lecture: Lec/lab: 132 Lab:
Is this course equivalent to another? They must have the same description, outcomes and credit.			☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	To be included in the new Aviation Maintenance Technology certificate and degree.			

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☐	☐
Audit in consultation with faculty	☒	☐

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number: AMT 193	☒ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Explores airframe/engine electrical components, including the inspection, service and repair of alternating and direct current electrical systems. Examines the application of electrical principles used in sensing, indicating and control of airframe and powerplant systems. Prerequisites: AMT 193. Audit available.

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to:
	1. Repair and inspect aircraft electrical system components.
	2. Install, check, and service airframe electrical wiring, controls, switches, indicators, and protective devices.
	3. Inspect, check, and troubleshoot constant speed and integrated speed drive generators.
	4. Repair engine electrical system components.
	5. Install and service engine electrical wiring, controls, switches, indicators and protective devices.
Outcomes assessment strategies:	Evaluations by exams, quizzes and lab work.

COURSE CONTENT, ACTIVITIES AND DESIGN

Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in "required activities" box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor.

Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Department required course activities (optional):	
Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	1. Repair and inspect aircraft electrical system components. • Crimp and splice wiring to manufacturers' specifications • Repair pins and sockets of aircraft connectors • Use a multi-meter for diode inspection • Select and install electrical bonding jumpers 2. Install, check, and service airframe electrical wiring, controls, switches, indicators, and protective devices. • Explain switch, fuse and circuit breaker derating factors • Determine applicability of electrical wire size and current-carrying capacity • Install electrical wiring in conduits • Select and install electrical bonding jumpers • Install and remove terminals, pins and sockets 3. Inspect, check, and troubleshoot constant speed and integrated speed drive generators. • Apply principles and architecture of AC and DC generators • Operate vibrator style, solid state and carbon-pile voltage regulators

	• Control output frequency and voltage of alternating current generators • Understand purpose of reverse-current cutout relay and effects of sticking points 4. Repair engine electrical system components. • Explain switch, fuse and circuit breaker derating factors • Determine applicability of electrical wire: size and current-carrying capacity • Understand requirements of a bonding jumper in carrying ground load • Install and remove terminals, pins and sockets 5. Install and service engine electrical wiring, controls, switches, indicators and protective devices. • Install and wire electrical switches, fuses and circuit breakers • Determine electrical maximum and continuous load of a circuit • Explain the purpose of shielding electrical wiring and equipment • Check armatures for grounds, shorts and opens • Apply methods for reducing armature reaction
Suggested Texts & Materials (specify if any texts or materials are required):	Aviation Maintenance Technician Handbook, Federal Aviation Administration; Introduction to Aircraft Maintenance, 3rd Edition, Avotek
Department Notes (optional)	

SECTION #2 FUNCTION OF COURSE WITHIN EXISTING AND/OR NEW PROGRAM(S)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☐ Yes ☒ No
Name of certificate(s):		# credit:
Name of degree(s):		# credit:
Will this new course be part of a new, proposed CGCC certificate or degree?		☒ Yes ☐ No
Name of new certificate(s):	Aviation Maintenance Technology	# credit: 96
Name of new degree(s):	Aviation Maintenance Technology AAS	# credit: 104
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	
Is this course used to supply related instruction for a certificate?		☐ Yes ☒ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.		

SECTION #3 ADDITIONAL INFORMATION FOR NEW CTE COURSES	
Transferability: Will this course transfer to another academic institution? Identify and describe the nature of the transfer.	CTE elective Comparable at Lane Community College
IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	No
Is there any potential impact on another department? Identify and consult with Department chairs whose courses may be impacted by this course, such as: content overlap, course duplication, prerequisite need, enrollment increase or decrease, etc.	☐ Yes ☒ No
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: 10/09/2020 ☐ No
Implementation term:	☒ Start of next academic year (summer term) ☐ Specific term (if BEFORE next academic year):
Course approval is dependent on approval of the related certificate/degree submission which documents the placement of the new course. Degree/certificate status will impact the speed of the process. The Curriculum Office will notify the submitter, department chair, and department director when the course has completed the approval process and is available to be scheduled. Curriculum changes generally go into effect at the beginning of the next academic year (summer term). Mid-year revisions/additions are discouraged but accommodated when possible if there is a specific, identifiable need.	

SECTION #4 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."		
Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	08-22-2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

CC date
CC decision
CC vote

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION			
Department:	CTE	Submitter name phone and email	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 194A	Credits:	3
Course Title: (60 characters max, including spaces)	Aviation Maintenance: General 104A	Transcript Title: (30 characters max, including spaces)	AM: General 104A
May this course be repeated for credit?	☐ Yes ☒ No For how many times?	Contact hours:	Lecture: Lec/lab: 33 Lab:
Is this course equivalent to another? They must have the same description, outcomes and credit.		☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	To be included in the new Aviation Maintenance Technology certificate and degree.		

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☐	☐
Audit in consultation with faculty	☒	☐

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number: AMT 193	☒ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Explores airframe electrical components, including the inspection, service and repair of alternating and direct current electrical systems. Examines the application of electrical principles used in sensing, indicating and control of airframe systems. Prerequisites: AMT 193. Audit available.

<table>
<tr><td colspan="2">LEARNING OUTCOMES: Describe what the student will be able to do “out there” (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)</td></tr>
<tr><td rowspan="4">Outcomes: (Use observable and measurable verbs)</td><td>Upon successful completion of this course, students will be able to:</td></tr>
<tr><td>1. Repair and inspect aircraft electrical system components.</td></tr>
<tr><td>2. Install, check, and service airframe electrical wiring, controls, switches, indicators, and protective devices.</td></tr>
<tr><td>3. Read and interpret aircraft circuit diagrams.</td></tr>
<tr><td>Outcomes assessment strategies:</td><td>Evaluations by exams, quizzes and lab work.</td></tr>
<tr><td colspan="2">COURSE CONTENT, ACTIVITIES AND DESIGN</td></tr>
<tr><td colspan="2">Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in “required activities” box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor.
Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.</td></tr>
<tr><td>Department required course activities (optional):</td><td></td></tr>
<tr><td>Course Content – organized by outcomes (list each outcome followed by an outline of the related content):</td><td>1. Repair and inspect aircraft electrical system components.
• Crimp and splice wiring to manufacturers' specifications
• Repair pins and sockets of aircraft connectors
• Use a multi-meter for diode inspection
• Select and install electrical bonding jumpers

2. Install, check, and service airframe electrical wiring, controls, switches, indicators, and protective devices.
• Explain switch, fuse and circuit breaker derating factors
• Determine applicability of electrical wire size and current-carrying capacity
• Install electrical wiring in conduits
• Select and install electrical bonding jumpers
• Install and remove terminals, pins and sockets

3. Read and interpret aircraft circuit diagrams.
• Trace electrical circuit logic in wiring diagrams
• Utilize multi-meter for diode and transistor inspection
• Apply principles of AC rectification with diodes
• Utilize Zener diodes for voltage regulation</td></tr>
</table>

Suggested Texts & Materials (specify if any texts or materials are required):	Aviation Maintenance Technician Handbook, Federal Aviation Administration; Introduction to Aircraft Maintenance, 3rd Edition, Avotek
Department Notes (optional)	

SECTION #2 FUNCTION OF COURSE WITHIN EXISTING AND/OR NEW PROGRAM(S)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☐ Yes ☒ No
Name of certificate(s):		# credit:
Name of degree(s):		# credit:
Will this new course be part of a new, proposed CGCC certificate or degree?		☒ Yes ☐ No
Name of new certificate(s):	Aviation Maintenance Technology	# credit: 96
Name of new degree(s):	Aviation Maintenance Technology AAS	# credit: 104
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	
Is this course used to supply related instruction for a certificate?		☐ Yes ☒ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.		

SECTION #3 ADDITIONAL INFORMATION FOR NEW CTE COURSES	
Transferability: Will this course transfer to another academic institution? Identify and describe the nature of the transfer.	CTE elective Comparable at Lane Community College
IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	No

Is there any potential impact on another department? Identify and consult with Department chairs whose courses may be impacted by this course, such as: content overlap, course duplication, prerequisite need, enrollment increase or decrease, etc.	☐ Yes ☒ No
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: 10/9/2020 ☐ No
Implementation term:	☒ Start of next academic year (summer term) ☐ Specific term (if BEFORE next academic year):
Course approval is dependent on approval of the related certificate/degree submission which documents the placement of the new course. Degree/certificate status will impact the speed of the process. The Curriculum Office will notify the submitter, department chair, and department director when the course has completed the approval process and is available to be scheduled. Curriculum changes generally go into effect at the beginning of the next academic year (summer term). Mid-year revisions/additions are discouraged but accommodated when possible if there is a specific, identifiable need.	

SECTION #4 DEPARTMENT REVIEW

"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."

Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	08-22-2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or HST 104). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu.
2. Refer to the curriculum office website for the Curriculum Committee meeting schedule and submission deadlines. You are encouraged to send submissions prior to the deadline so that the curriculum office may review and provide feedback.
3. Course submissions will be placed on the next agenda with available time slots. You will be notified of your submission's time for review, and you will be sent a signature page that may be completed electronically or manually by your department chair and department dean. It is the submitter's responsibility to ensure that completed signature pages are delivered to the Curriculum Office the day before the Curriculum Committee meeting for which the submission is scheduled. Submissions without signed signature pages will be postponed.
4. It is not mandatory that you attend the Curriculum Committee meeting in which your submission is scheduled for review; however, it is strongly encouraged that you attend so that you may represent your submission and respond to any committee questions. Unanswered questions may result in a submission being rescheduled for further clarification.

CC date
CC decision
CC vote

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION				
Department:	CTE		Submitter name phone and email	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 194B		Credits:	3
Course Title: (60 characters max, including spaces)	Aviation Maintenance: General 104B		Transcript Title: (30 characters max, including spaces)	AM: General 104B
May this course be repeated for credit?	☐ Yes ☒ No	For how many times?	Contact hours:	Lecture: Lec/lab: 33 Lab:
Is this course equivalent to another? They must have the same description, outcomes and credit.			☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	To be included in the new Aviation Maintenance Technology certificate and degree.			

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☐	☐
Audit in consultation with faculty	☒	☐

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number: AMT 194A	☐ prerequisite	☐ corequisite	☒ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Explores engine electrical components, including the inspection, service and repair of alternating and direct current electrical systems. Examines the application of electrical principles used in sensing, indicating and control of powerplant systems. Prerequisite/concurrent: AMT 194A. Audit available.

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to: 1. Inspect, check, and troubleshoot constant speed and integrated speed drive generators. 2. Repair engine electrical system components. 3. Install and service engine electrical wiring, controls, switches, indicators and protective devices.
Outcomes assessment strategies:	Evaluations by exams, quizzes and lab work.

COURSE CONTENT, ACTIVITIES AND DESIGN

Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in "required activities" box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor.

Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Department required course activities (optional):	
Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	1. Inspect, check, and troubleshoot constant speed and integrated speed drive generators. • Apply principles and architecture of AC and DC generators • Operate vibrator style, solid state and carbon-pile voltage regulators • Control output frequency and voltage of alternating current generators • Understand purpose of reverse-current cutout relay and effects of sticking points 2. Repair engine electrical system components. • Explain switch, fuse and circuit breaker derating factors • Determine applicability of electrical wire: size and current-carrying capacity • Understand requirements of a bonding jumper in carrying ground load • Install and remove terminals, pins and sockets 3. Install and service engine electrical wiring, controls, switches, indicators and protective devices. • Install and wire electrical switches, fuses and circuit breakers • Determine electrical maximum and continuous load of a circuit • Explain the purpose of shielding electrical wiring and equipment • Check armatures for grounds, shorts and opens • Apply methods for reducing armature reaction

Suggested Texts & Materials (specify if any texts or materials are required):	Aviation Maintenance Technician Handbook, Federal Aviation Administration; Introduction to Aircraft Maintenance, 3rd Edition, Avotek
Department Notes (optional)	

SECTION #2 FUNCTION OF COURSE WITHIN EXISTING AND/OR NEW PROGRAM(S)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☐ Yes ☒ No
Name of certificate(s):		# credit:
Name of degree(s):		# credit:
Will this new course be part of a new, proposed CGCC certificate or degree?		☒ Yes ☐ No
Name of new certificate(s):	Aviation Maintenance Technology	# credit: 96
Name of new degree(s):	Aviation Maintenance Technology AAS	# credit: 104
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	
Is this course used to supply related instruction for a certificate?		☐ Yes ☒ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.		

SECTION #3 ADDITIONAL INFORMATION FOR NEW CTE COURSES	
Transferability: Will this course transfer to another academic institution? Identify and describe the nature of the transfer.	CTE elective Comparable at Lane Community College
IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	No

Is there any potential impact on another department? Identify and consult with Department chairs whose courses may be impacted by this course, such as: content overlap, course duplication, prerequisite need, enrollment increase or decrease, etc.	☐ Yes ☒ No
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: 10/9/2020 ☐ No
Implementation term:	☒ Start of next academic year (summer term) ☐ Specific term (if BEFORE next academic year):
Course approval is dependent on approval of the related certificate/degree submission which documents the placement of the new course. Degree/certificate status will impact the speed of the process. The Curriculum Office will notify the submitter, department chair, and department director when the course has completed the approval process and is available to be scheduled. Curriculum changes generally go into effect at the beginning of the next academic year (summer term). Mid-year revisions/additions are discouraged but accommodated when possible if there is a specific, identifiable need.	

SECTION #4 DEPARTMENT REVIEW

"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."

Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	08-22-2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or HST 104). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu.
2. Refer to the curriculum office website for the Curriculum Committee meeting schedule and submission deadlines. You are encouraged to send submissions prior to the deadline so that the curriculum office may review and provide feedback.
3. Course submissions will be placed on the next agenda with available time slots. You will be notified of your submission's time for review, and you will be sent a signature page that may be completed electronically or manually by your department chair and department dean. It is the submitter's responsibility to ensure that completed signature pages are delivered to the Curriculum Office the day before the Curriculum Committee meeting for which the submission is scheduled. Submissions without signed signature pages will be postponed.
4. It is not mandatory that you attend the Curriculum Committee meeting in which your submission is scheduled for review; however, it is strongly encouraged that you attend so that you may represent your submission and respond to any committee questions. Unanswered questions may result in a submission being rescheduled for further clarification.

CC date
CC decision
CC vote

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION			
Department:	CTE	Submitter name phone and email	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 195	Credits:	6
Course Title: (60 characters max, including spaces)	Aviation Maintenance: General 105	Transcript Title: (30 characters max, including spaces)	AM: General 105
May this course be repeated for credit?	☐ Yes ☒ No For how many times?	Contact hours:	Lecture: Lec/lab: 132 Lab:
Is this course equivalent to another? They must have the same description, outcomes and credit.		☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	To be included in the new Aviation Maintenance Technology certificate and degree.		

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☐	☐
Audit in consultation with faculty	☒	☐

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number: AMT 194	☒ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Examines the use of mechanical and electronic systems in sensing, communicating, and displaying information. Explores solid state and digital devices, sensors, and special circuits used in aircraft instrumentation systems, fuel systems and fire protection systems. Analyzes the methods used in testing, inspecting, and troubleshooting those systems. Prerequisites: AMT 194 or (AMT 194A and AMT 194B). Audit available.

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to:
	1. Apply the principles of operation and system troubleshooting methods for aircraft and engine instruments.
	2. Apply electrical schematics to troubleshoot and repair aircraft fire protection systems.
	3. Perform airframe and engine conformity inspections.
	4. Identify, troubleshoot and repair aircraft and engine fuel systems.
Outcomes assessment strategies:	Evaluations by exams, quizzes and lab work.

COURSE CONTENT, ACTIVITIES AND DESIGN

Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in "required activities" box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor.

Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Department required course activities (optional):	
Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	1. Apply the principles of operation and system troubleshooting methods for aircraft and engine instruments. • Inspect, service, troubleshoot, and repair electronic flight instrument systems • Inspect, service, troubleshoot, and repair both mechanical and electrical heading, speed, altitude, temperature, pressure, and position indicating systems to include the use of built-in test equipment • Troubleshoot, service, and repair electrical and mechanical fluid rate-of-flow indicating systems • Inspect, service, troubleshoot, and repair electrical and mechanical engine temperature, pressure, and r.p.m. indicating systems 2. Apply electrical schematics to troubleshoot and repair aircraft fire protection systems. • Inspect, check, and service smoke and carbon monoxide detection systems • Inspect, check, service, troubleshoot, and repair aircraft fire detection and extinguishing systems • Determine the causes of system malfunctions • Check fire warning sensors or detectors for open or short circuits

	3. Perform airframe and engine conformity inspections. • Determine condition of airframe systems and components • Determine that aircraft conforms to FAA specifications • Conduct detailed inspection: 100-hour inspection • Determine when progressive inspections are necessary 4. Identify, troubleshoot and repair aircraft and engine fuel systems. • Check and service fuel dump systems • Perform fuel management transfer, and defueling • Inspect, check, and repair pressure fueling systems • Repair aircraft fuel system components • Inspect and repair fluid quantity indicating systems • Troubleshoot, service, and repair fluid pressure and temperature warning systems • Inspect, check, service, troubleshoot, and repair aircraft fuel systems
Suggested Texts & Materials (specify if any texts or materials are required):	Aviation Maintenance Technician Handbook, Federal Aviation Administration; Introduction to Aircraft Maintenance, 3rd Edition, Avotek
Department Notes (optional)	

SECTION #2 FUNCTION OF COURSE WITHIN EXISTING AND/OR NEW PROGRAM(S)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☐ Yes ☒ No
Name of certificate(s):		# credit:
Name of degree(s):		# credit:
Will this new course be part of a new, proposed CGCC certificate or degree?		☒ Yes ☐ No
Name of new certificate(s):	Aviation Maintenance Technology	# credit: 96
Name of new degree(s):	Aviation Maintenance Technology AAS	# credit: 104
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	
Is this course used to supply related instruction for a certificate?		☐ Yes ☒ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.		

SECTION #3 ADDITIONAL INFORMATION FOR NEW CTE COURSES	
Transferability: Will this course transfer to another academic institution? Identify and describe the nature of the transfer.	CTE elective Comparable at Lane Community College
IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	No
Is there any potential impact on another department? Identify and consult with Department chairs whose courses may be impacted by this course, such as: content overlap, course duplication, prerequisite need, enrollment increase or decrease, etc.	☐ Yes ☒ No
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: 10/09/2020 ☐ No
Implementation term:	☒ Start of next academic year (summer term) ☐ Specific term (if BEFORE next academic year):
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Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	08-22-2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

CC date
CC decision
CC vote

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION			
Department:	CTE	Submitter name phone and email	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 261	Credits:	6
Course Title: (60 characters max, including spaces)	Aviation Maintenance: Airframe 1	Transcript Title: (30 characters max, including spaces)	AM: Airframe 1
May this course be repeated for credit?	☐ Yes ☒ No For how many times?	Contact hours:	Lecture: Lec/lab: 132 Lab:
Is this course equivalent to another? They must have the same description, outcomes and credit.		☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	To be included in the new Aviation Maintenance Technology certificate and degree.		

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☐	☐
Audit in consultation with faculty	☒	☐

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number: AMT 195	☒ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Details ice and rain control systems and associated warning systems. Examines the fundamentals of installation, operation and maintenance of airborne communication and navigation instruments, and auto flight systems. Introduces methods of assembly and rigging commonly used in preparing aircraft for a safe test flight. Provides welding fundamentals in relation to aircraft repair. Prerequisites: AMT 195. Audit available.

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to:
	1. Demonstrate knowledge of aerodynamics and its relationship to aircraft assembly and rigging.
	2. Assemble, rig, and inspect aircraft using proper procedures and techniques.
	3. Apply the principles of operation and maintenance procedures to communication, navigation, and inter-graded flight control systems.
	4. Demonstrate basic welding techniques.
	5. Service and repair ice and rain control system.
Outcomes assessment strategies:	Evaluations by exams, quizzes and lab work.

COURSE CONTENT, ACTIVITIES AND DESIGN

Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in "required activities" box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor.

Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Department required course activities (optional):	
Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	1. Demonstrate knowledge of aerodynamics and its relationship to aircraft assembly and rigging. • Rig rotary-wing aircraft • Rig fixed-wing aircraft • Check alignment of structures • Balance, rig and inspect moveable primary and secondary flight control surfaces 2. Assemble, rig, and inspect aircraft using proper procedures and techniques. • Assemble aircraft components, including flight control surfaces • Balance, rig, and inspect movable primary and secondary flight control surfaces • Jack aircraft • Prepare fuselage for alignment check • Method and significance of expressing reference positions 3. Apply the principles of operation and maintenance procedures to communication, navigation, and inter-graded flight control systems. • Inspect and troubleshoot autopilot, servos and approach coupling systems

	• Inspect and service aircraft electronic communication and navigation systems, including VHF passenger address interphones and static discharge devices, aircraft VOR, ILS, Radar beacon transponders, flight management computers, and GPWS • Inspect and repair antenna and electronic equipment installations • Inspect, troubleshoot, service, and repair airframe ice and rain control systems 4. Demonstrate basic welding techniques. • Weld magnesium and titanium • Solder stainless steel • Fabricate tubular structures • Solder, braze, gas-weld, and arc-weld steel • Weld aluminum and stainless steel 5. Service and repair ice and rain control system. • Install deicer boots • Understand operating principles of anti-icing systems • Protect deicer boots from deterioration
Suggested Texts & Materials (specify if any texts or materials are required):	Aviation Maintenance Technician Handbook, Federal Aviation Administration; Introduction to Aircraft Maintenance, 3rd Edition, Avotek
Department Notes (optional)	

SECTION #2 FUNCTION OF COURSE WITHIN EXISTING AND/OR NEW PROGRAM(S)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☐ Yes ☒ No
Name of certificate(s):		# credit:
Name of degree(s):		# credit:
Will this new course be part of a new, proposed CGCC certificate or degree?		☒ Yes ☐ No
Name of new certificate(s):	Aviation Maintenance Technology	# credit: 96
Name of new degree(s):	Aviation Maintenance Technology AAS	# credit: 104
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	
Is this course used to supply related instruction for a certificate?		☐ Yes ☒ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.		

SECTION #3 ADDITIONAL INFORMATION FOR NEW CTE COURSES		
Transferability: Will this course transfer to another academic institution? Identify and describe the nature of the transfer.	CTE elective Comparable at Lane Community College	
IMPACT ON OTHER PROGRAMS AND DEPARTMENTS		
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No	
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	No	
Is there any potential impact on another department? Identify and consult with Department chairs whose courses may be impacted by this course, such as: content overlap, course duplication, prerequisite need, enrollment increase or decrease, etc.		☐ Yes ☒ No
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.		
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: 10/09/2020 ☐ No	
Implementation term:	☒ Start of next academic year (summer term) ☐ Specific term (if BEFORE next academic year):	
Course approval is dependent on approval of the related certificate/degree submission which documents the placement of the new course. Degree/certificate status will impact the speed of the process. The Curriculum Office will notify the submitter, department chair, and department director when the course has completed the approval process and is available to be scheduled. Curriculum changes generally go into effect at the beginning of the next academic year (summer term). Mid-year revisions/additions are discouraged but accommodated when possible if there is a specific, identifiable need.		

SECTION #4 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."		
Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	08-22-2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

CC date
CC decision
CC vote

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION			
Department:	CTE	Submitter name phone and email	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 262	Credits:	6
Course Title: (60 characters max, including spaces)	Aviation Maintenance: Airframe 2	Transcript Title: (30 characters max, including spaces)	AM: Airframe 2
May this course be repeated for credit?	☐ Yes ☒ No For how many times?	Contact hours:	Lecture: Lec/lab: 132 Lab:
Is this course equivalent to another? They must have the same description, outcomes and credit.		☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	To be included in the new Aviation Maintenance Technology certificate and degree.		

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☐	☐
Audit in consultation with faculty	☒	☐

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number: AMT 261	☒ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Examines the inspection and repair of aircraft landing gear and hydraulic and pneumatic system components. Introduces various airframe systems, specifically position and warning systems. Prerequisites: AMT 261. Audit available.

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to: 1. Inspect and safely perform maintenance and repair of aircraft landing gear, hydraulic and pneumatic systems and their components, in accordance with the manufacturer's service manuals, acceptable industry practices, and applicable regulations. 2. Identify and apply basic theory and computation skills regarding hydraulic and pneumatic power as they relate to landing gear and various aircraft structure mechanical advantage devices. 3. Identify and apply the principles of function and safe operation of landing gear, hydraulic and pneumatic systems and position and warning systems. 4. Inspect and service or repair speed and configuration warning systems, electrical brake controls and antiskid systems.
Outcomes assessment strategies:	Evaluations by exams, quizzes and lab work.

COURSE CONTENT, ACTIVITIES AND DESIGN

Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in "required activities" box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor.

Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Department required course activities (optional):	
Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	1. Inspect and safely perform maintenance and repair of aircraft landing gear, hydraulic and pneumatic systems and their components, in accordance with the manufacturer's service manuals, acceptable industry practices, and applicable regulations. • Inspect, check, service, and repair landing gear, retraction systems, shock struts, brakes, wheels, tires, and steering systems. • Inspect, check, service, troubleshoot, and repair hydraulic and pneumatic power systems. • Repair hydraulic and pneumatic power systems components • Service hydraulic reservoirs 2. Identify and apply basic theory and computation skills regarding hydraulic and pneumatic power as they relate to landing gear and various aircraft structure mechanical advantage devices. • Perform hydraulic pressure equalization to single disc brake and replacement of brake lining. • Determine causes of incorrect system pressure.

	• Apply operating principles of hydraulic brake antiskid system. • Understand F=AP and V=AL calculations. • Identify and select hydraulic fluids. 3. Identify and apply the principles of function and safe operation of landing gear, hydraulic and pneumatic systems and position and warning systems. • Inspect, check, troubleshoot, and service landing gear position indicating and warning systems. • Adjust landing gear alignment • Understand operation of oleo struts during landing and the function of metering pin • Determine and correct various brake system malfunctions 4. Inspect and service or repair speed and configuration warning systems, electrical brake controls and antiskid systems. • Determine cause of a gear unsafe warning signal • Identify the effect of various electrical faults in the operation of the landing gear warning system • Apply general requirements for installing skid detectors
Suggested Texts & Materials (specify if any texts or materials are required):	Aviation Maintenance Technician Handbook, Federal Aviation Administration; Introduction to Aircraft Maintenance, 3rd Edition, Avotek
Department Notes (optional)	

SECTION #2 FUNCTION OF COURSE WITHIN EXISTING AND/OR NEW PROGRAM(S)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☐ Yes ☒ No
Name of certificate(s):		# credit:
Name of degree(s):		# credit:
Will this new course be part of a new, proposed CGCC certificate or degree?		☒ Yes ☐ No
Name of new certificate(s):	Aviation Maintenance Technology	# credit: 96
Name of new degree(s):	Aviation Maintenance Technology AAS	# credit: 104
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	
Is this course used to supply related instruction for a certificate?		☐ Yes ☒ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.		

SECTION #3 ADDITIONAL INFORMATION FOR NEW CTE COURSES	
Transferability: Will this course transfer to another academic institution? Identify and describe the nature of the transfer.	CTE elective Comparable Lane Community College
IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	No
Is there any potential impact on another department? Identify and consult with Department chairs whose courses may be impacted by this course, such as: content overlap, course duplication, prerequisite need, enrollment increase or decrease, etc.	☐ Yes ☒ No
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: 10/09/2020 ☐ No
Implementation term:	☒ Start of next academic year (summer term) ☐ Specific term (if BEFORE next academic year):
Course approval is dependent on approval of the related certificate/degree submission which documents the placement of the new course. Degree/certificate status will impact the speed of the process. The Curriculum Office will notify the submitter, department chair, and department director when the course has completed the approval process and is available to be scheduled. Curriculum changes generally go into effect at the beginning of the next academic year (summer term). Mid-year revisions/additions are discouraged but accommodated when possible if there is a specific, identifiable need.	

SECTION #4 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."		
Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	08-22-2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

CC date
CC decision
CC vote

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION			
Department:	CTE	Submitter name phone and email	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 263	Credits:	6
Course Title: (60 characters max, including spaces)	Aviation Maintenance: Airframe 3	Transcript Title: (30 characters max, including spaces)	AM: Airframe 3
May this course be repeated for credit?	☐ Yes ☒ No For how many times?	Contact hours:	Lecture: Lec/lab: 132 Lab:
Is this course equivalent to another? They must have the same description, outcomes and credit.		☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	To be included in the new Aviation Maintenance Technology certificate and degree.		

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☐	☐
Audit in consultation with faculty	☒	☐

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number: AMT 262	☒ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Introduces sheet metal, its properties, and uses in fabrication of structural and nonstructural components of aerospace vehicles. Addresses inspection techniques along with fabrication and repair processes for bending, cutting, forming, drilling, and riveting aluminum sheet metal parts. Prerequisites: AMT 262. Audit available.

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)	
Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to: 1. Apply computation skills and interpret drawings and instructions for the preparation of aircraft structural repairs and alterations. 2. Identify and use appropriate aircraft sheet metal hand and shop tools during the preparation and fabrication of aircraft structural repair parts. 3. Select and install various sizes of conventional rivets and special fasteners using proper preparation and technique. 4. Identify and apply acceptable methods, techniques and practices during the assembly and repair of aircraft sheet metal structures.
Outcomes assessment strategies:	Evaluations by exams, quizzes and lab work.
COURSE CONTENT, ACTIVITIES AND DESIGN	
Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in "required activities" box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor. Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.	
Department required course activities (optional):	
Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	1. Apply computation skills and interpret drawings and instructions for the preparation of aircraft structural repairs and alterations. • Calculate flat layout dimensions • Determine neutral axis • Calculate amount of material based on bend • Determine flat layout dimensions prior to bending • Form, lay out, and bend sheet metal 2. Identify and use appropriate aircraft sheet metal hand and shop tools during the preparation and fabrication of aircraft structural repair parts. • Demonstrate use of a reamer • Demonstrate use of twist drills • Perform dimpling process • Form metal by bumping 3. Select and install various sizes of conventional rivets and special fasteners using proper preparation and technique. • Select, install, and remove special fasteners for metallic, bonded, and

	composite structures. • Determine rivet length and diameter • Install conventional rivets • Operate air-operated riveting gun 4. Identify and apply acceptable methods, techniques and practices during the assembly and repair of aircraft sheet metal structures. • Inspect, test, and repair fiberglass, plastics, honeycomb, composite, and laminated primary and secondary structures • Prepare dissimilar metals for assembly • Detect bearing failure of sheet metal • Perform watertight joint construction
Suggested Texts & Materials (specify if any texts or materials are required):	Aviation Maintenance Technician Handbook, Federal Aviation Administration; Introduction to Aircraft Maintenance, 3rd Edition, Avotek
Department Notes (optional)	

SECTION #2 FUNCTION OF COURSE WITHIN EXISTING AND/OR NEW PROGRAM(S)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☐ Yes ☒ No
Name of certificate(s):		# credit:
Name of degree(s):		# credit:
Will this new course be part of a new, proposed CGCC certificate or degree?		☒ Yes ☐ No
Name of new certificate(s):	Aviation Maintenance Technology	# credit: 96
Name of new degree(s):	Aviation Maintenance Technology AAS	# credit: 104
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	
Is this course used to supply related instruction for a certificate?		☒ Yes ☐ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.		

SECTION #3 ADDITIONAL INFORMATION FOR NEW CTE COURSES	
Transferability: Will this course transfer to another academic institution? Identify and describe the nature of the transfer.	CTE elective Comparable at Lane Community College

IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	No
Is there any potential impact on another department? Identify and consult with Department chairs whose courses may be impacted by this course, such as: content overlap, course duplication, prerequisite need, enrollment increase or decrease, etc.	☐ Yes ☒ No
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: 10/09/2020 ☐ No
Implementation term:	☒ Start of next academic year (summer term) ☐ Specific term (if BEFORE next academic year):
Course approval is dependent on approval of the related certificate/degree submission which documents the placement of the new course. Degree/certificate status will impact the speed of the process. The Curriculum Office will notify the submitter, department chair, and department director when the course has completed the approval process and is available to be scheduled. Curriculum changes generally go into effect at the beginning of the next academic year (summer term). Mid-year revisions/additions are discouraged but accommodated when possible if there is a specific, identifiable need.	

SECTION #4 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."		
Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	08-22-2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or HST 104). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu.

Columbia Gorge Community College

Embedded Related Instruction

SECTION #1 GENERAL INFORMATION			
Department:	CTE	Submitter name: Phone: Email:	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 263	Course Title	Aviation Maintenance: Airframe 3
Credits:	6		

SECTION #2 DETAILS OF RELATED INSTRUCTION		
Identify the number of hours and the course activities in the areas of: 1) computation, 2) communication and 3) human relations. Please be specific regarding the nature of the activities and instruction. Related instruction must be identified/apparent within a course outcome.		
Computation	Hours of instruction (include study and/or practice in and out of the classroom, 30 hours per credit):	19.5
Course Outcome: Copy from the CCOG the outcome(s) which is(are) associated with computation.		
1. Apply computation skills and interpret drawings and instructions for the preparation of aircraft structural repairs and alterations.		
Content (Activities, Skills, Concepts, etc.): provide details, including specific number of RI hours for each activity.		
• Calculate flat layout dimensions (RI hours 4.5) • Determine neutral axis (RI hours 6) • Calculate amount of material based on bend (RI hours 4.5) • Determine flat layout dimensions prior to bending (RI hours 4.5)		
Communication	Hours of instruction (include study and/or practice in and out of the classroom 30 hours per credit):	N/A
Course Outcome: Copy from the CCOG the outcome(s) which is(are) associated with communication.		
Content (Activities, Skills, Concepts, etc.): provide details, including specific number of RI hours for each activity.		
Human Relations	Hours of instruction (include study and/or practice in and out of the classroom 30 hours per credit):	N/A
Course Outcome: Copy from the CCOG the outcome(s) which is(are) associated with human relations.		

Content (Activities, Skills, Concepts, etc.): provide details, including specific number of RI hours for each activity.

SECTION #3 INSTRUCTOR QUALIFICATIONS	
Instructors qualified to teach related instruction in **computation, communication, and/or human relations** will have the following acceptable subject area skills, education or training. Provide details.	
Identify area(s) of related instruction	Clearly identify qualifications instructors must have to teach EACH area as identified above
☒ Computation	Current Aircraft and Powerplant mechanic certifications
☐ Communication	
☐ Human Relations	

SECTION #4 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."		
Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	10/20/2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

NEXT STEPS:

1. Save this document as the course prefix and number followed by .RI (e.g. MA 117.RI or RET 112.RI). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu along with the affiliated New Course or Course Revision form.
2. Refer to the curriculum office website for the Curriculum Committee meeting schedule and submission deadlines. You are encouraged to send submissions prior to the deadline so that the curriculum office may review and provide feedback.
3. Course submissions will be placed on the next agenda with available time slots. You will be notified of your submission's time for review, and you will be sent a signature page that may be completed electronically or manually by your department chair and department dean. It is the submitter's responsibility to ensure that completed signature pages are delivered to the Curriculum Office the day before the Curriculum Committee meeting for which the submission is scheduled. Submissions without signed signature pages will be postponed.
4. It is not mandatory that you attend the Curriculum Committee meeting in which your submission is scheduled for review; however, it is strongly encouraged that you attend so that you may represent your submission and respond to any committee questions. Unanswered questions may result in a submission being rescheduled for further clarification.

CC date
CC decision
CC vote

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION			
Department:	CTE	Submitter name phone and email	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 264	Credits:	6
Course Title: (60 characters max, including spaces)	Aviation Maintenance: Airframe 4	Transcript Title: (30 characters max, including spaces)	AM: Airframe 4
May this course be repeated for credit?	☐ Yes ☒ No For how many times?	Contact hours:	Lecture: Lec/lab: 132 Lab:
Is this course equivalent to another? They must have the same description, outcomes and credit.		☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	To be included in the new Aviation Maintenance Technology certificate and degree.		

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☐	☐
Audit in consultation with faculty	☒	☐

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number: AMT 263	☒ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Examines the theory and techniques used in the fabrication, inspection, repair, and finishing of bonded structures, plastics, wood structures, fabric covering, honeycomb structures, and advanced composite structures. Details the environmental control systems (head, air conditioning, pressurization, oxygen). Prerequisites: AMT 263. Audit available.

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to:
	1. Fabricate, and perform repairs to wood and plastic components and composite structures.
	2. Determine the criteria for selecting special fastener systems used in composite structures.
	3. Identify approved aircraft fabric covering processes, materials, and inspection procedures.
	4. Select and apply aircraft finishing materials.
	5. Inspect, troubleshoot and repair cabin atmosphere control systems.
Outcomes assessment strategies:	Evaluations by exams, quizzes and lab work.

COURSE CONTENT, ACTIVITIES AND DESIGN

Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in "required activities" box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor.

Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Department required course activities (optional):	
Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	1. Fabricate, and perform repairs to wood and plastic components and composite structures. • Inspect bonded structures • Inspect, test, and repair fiberglass, plastics, honeycomb, composite, and laminated primary and secondary structures • Inspect, check, service, and repair windows, doors, and interior furnishings • Identify appropriate glue for repair and construction • Determine strength of wood structures 2. Determine the criteria for selecting special fastener systems used in composite structures. • Select, install, and remove special fasteners for metallic, bonded, and composite structures • Install conventional rivets • Repair elongated bolt holes • Identify stresses on rivets • Apply deicer boot fasteners 3. Identify approved aircraft fabric covering processes, materials, and inspection

	procedures. • Select and apply fabric and fiberglass covering materials • Inspect, test, and repair fabric and fiberglass • Repair doped and lapped seams • Make a sewn repair 4. Select and apply aircraft finishing materials. • Apply trim, letters, and touchup paint • Identify, select and apply aircraft finishing materials • Determine requirements for registration markings • Identify spray painting defects caused by improper techniques 5. Inspect, troubleshoot and repair cabin atmosphere control systems. • Inspect, troubleshoot, service, and repair heating, cooling, air conditioning, pressurization systems, and air cycle machines • Inspect, check, troubleshoot, service and repair oxygen systems • Identify sources of Freon system contamination • Apply principles to provide and control pressurization
Suggested Texts & Materials (specify if any texts or materials are required):	Aviation Maintenance Technician Handbook, Federal Aviation Administration; Introduction to Aircraft Maintenance, 3rd Edition, Avotek
Department Notes (optional)	

SECTION #2 FUNCTION OF COURSE WITHIN EXISTING AND/OR NEW PROGRAM(S)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☐ Yes ☒ No
Name of certificate(s):		# credit:
Name of degree(s):		# credit:
Will this new course be part of a new, proposed CGCC certificate or degree?		☒ Yes ☐ No
Name of new certificate(s):	Aviation Maintenance Technology	# credit: 96
Name of new degree(s):	Aviation Maintenance Technology AAS	# credit: 104
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	
Is this course used to supply related instruction for a certificate?		☐ Yes ☒ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.		

SECTION #3 ADDITIONAL INFORMATION FOR NEW CTE COURSES	
Transferability: Will this course transfer to another academic institution? Identify and describe the nature of the transfer.	CTE elective Comparable Lane Community College
IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	No
Is there any potential impact on another department? Identify and consult with Department chairs whose courses may be impacted by this course, such as: content overlap, course duplication, prerequisite need, enrollment increase or decrease, etc.	☐ Yes ☒ No
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: 10/09/2020 ☐ No
Implementation term:	☒ Start of next academic year (summer term) ☐ Specific term (if BEFORE next academic year):
Course approval is dependent on approval of the related certificate/degree submission which documents the placement of the new course. Degree/certificate status will impact the speed of the process. The Curriculum Office will notify the submitter, department chair, and department director when the course has completed the approval process and is available to be scheduled. Curriculum changes generally go into effect at the beginning of the next academic year (summer term). Mid-year revisions/additions are discouraged but accommodated when possible if there is a specific, identifiable need.	

SECTION #4 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."		
Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	08-22-2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

CC date
CC decision
CC vote

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION			
Department:	CTE	Submitter name phone and email	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 271	Credits:	6
Course Title: (60 characters max, including spaces)	Aviation Maintenance: Powerplant 1	Transcript Title: (30 characters max, including spaces)	AM: Powerplant 1
May this course be repeated for credit?	☐ Yes ☒ No For how many times?	Contact hours:	Lecture: Lec/lab: 132 Lab:
Is this course equivalent to another? They must have the same description, outcomes and credit.		☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	To be included in the new Aviation Maintenance Technology certificate and degree.		

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☐	☐
Audit in consultation with faculty	☒	☐

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number: AMT 195	☒ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Introduces the theory of operation and construction of the internal combustion engine. Examines the combustion processes, design rationale, cooling and lubrication of internal combustion of reciprocating engines. Prerequisite: AMT 195. Audit available.

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)	
Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to: 1. Apply knowledge of construction and operation to the maintenance, repair and troubleshooting of aircraft reciprocating engines. 2. Overhaul an aircraft reciprocating engine, implementing the complete inspection of each component for compliance with appropriate regulations and airworthiness standards. 3. Inspect and troubleshoot engine installations. 4. Implement the proper use of precision measuring tools during the overhaul process of an aircraft reciprocating engine. 5. Identify, analyze and apply strategies for the research of all current manufacturer service information, and other airworthiness requirements including airworthiness directives, prior to the maintenance, repair or overhaul of aircraft reciprocating engines.
Outcomes assessment strategies:	Evaluations by exams, quizzes and lab work.
COURSE CONTENT, ACTIVITIES AND DESIGN	
Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in "required activities" box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor. Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.	
Department required course activities (optional):	
Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	1. Apply knowledge of construction and operation to the maintenance, repair and troubleshooting of aircraft reciprocating engines. • Inspect and repair a reciprocating engine • Understand construction characteristics of crankshaft and rod assembly • Analyze operation of thrust bearings and crankshaft bearings • Classify reciprocating engines and firing orders 2. Overhaul an aircraft reciprocating engine, implementing the complete inspection of each component for compliance with appropriate regulations and airworthiness standards. • Grind and reface valves and valve seats • Purpose of choke or taper-ground cylinders • Indications of failed engine bearings • Repair scored pistons. 3. Inspect and troubleshoot engine installations.

	• Check engine valve clearances • Perform compression check • Test operation of ignition system • Identify operating indications of a worn or weak engine. 4. Implement the proper use of precision measuring tools during the overhaul process of an aircraft reciprocating engine. • Measure inside diameter, taper and out-of-round of cylinder • Check valve stem stretch • Install and time magneto • Repair a scored aluminum piston 5. Identify, analyze and apply strategies for applying the research of all current manufacturer service information, and other airworthiness requirements including airworthiness directives, prior to the maintenance, repair or overhaul of aircraft reciprocating engines. • Identify manufacturer engine service resources • Research FAA airworthiness requirements • Read and interpret service information and airworthiness requirements for application
Suggested Texts & Materials (specify if any texts or materials are required):	Aviation Maintenance Technician Handbook, Federal Aviation Administration; Introduction to Aircraft Maintenance, 3rd Edition, Avotek
Department Notes (optional)	

SECTION #2 FUNCTION OF COURSE WITHIN EXISTING AND/OR NEW PROGRAM(S)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☐ Yes ☒ No
Name of certificate(s):		# credit:
Name of degree(s):		# credit:
Will this new course be part of a new, proposed CGCC certificate or degree?		☒ Yes ☐ No
Name of new certificate(s):	Aviation Maintenance Technology	# credit: 96
Name of new degree(s):	Aviation Maintenance Technology AAS	# credit: 104
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	
Is this course used to supply related instruction for a certificate?		☐ Yes ☒ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.		

SECTION #3 ADDITIONAL INFORMATION FOR NEW CTE COURSES	
Transferability: Will this course transfer to another academic institution? Identify and describe the nature of the transfer.	CTE elective Comparable at Lane Community College
IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	No
Is there any potential impact on another department? Identify and consult with Department chairs whose courses may be impacted by this course, such as: content overlap, course duplication, prerequisite need, enrollment increase or decrease, etc.	☐ Yes ☒ No
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: 10/09/2020 ☐ No
Implementation term:	☒ Start of next academic year (summer term) ☐ Specific term (if BEFORE next academic year):
Course approval is dependent on approval of the related certificate/degree submission which documents the placement of the new course. Degree/certificate status will impact the speed of the process. The Curriculum Office will notify the submitter, department chair, and department director when the course has completed the approval process and is available to be scheduled. Curriculum changes generally go into effect at the beginning of the next academic year (summer term). Mid-year revisions/additions are discouraged but accommodated when possible if there is a specific, identifiable need.	

SECTION #4 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."		
Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	08-22-2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

CC date
CC decision
CC vote

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION			
Department:	CTE	Submitter name phone and email	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 272	Credits:	6
Course Title: (60 characters max, including spaces)	Aviation Maintenance: Powerplant 2	Transcript Title: (30 characters max, including spaces)	AM: Powerplant 2
May this course be repeated for credit?	☐ Yes ☒ No For how many times?	Contact hours:	Lecture: Lec/lab: 132 Lab:
Is this course equivalent to another? They must have the same description, outcomes and credit.		☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	To be included in the new Aviation Maintenance Technology certificate and degree.		

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☐	☐
Audit in consultation with faculty	☒	☐

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number: AMT 271	☒ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Examines the disassembly, assembly, inspection and repair of aircraft turbine engines. Emphasizes the use of technical data, appropriate tools and inspection devices along with special safety procedures related to the servicing, operation and repair of turbine engines. Addresses turbine driven auxiliary power units. Prerequisites: AMT 271. Audit available.

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to: 1. Apply the principles of turbine engine operation and thrust production during the maintenance and repair of aircraft turbine engines. 2. Identify the principles of turbine engine component operation and their impact on the operation of the aircraft turbine engine and its auxiliary units. 3. Research and implement a strategy for accurate and timely maintenance of the overhaul of an aircraft turbine engine. 4. Perform the overhaul of an aircraft turbine engine, implementing the complete inspection of each component for compliance with appropriate regulations and airworthiness standards.
Outcomes assessment strategies:	Evaluations by exams, quizzes and lab work.

COURSE CONTENT, ACTIVITIES AND DESIGN

Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in "required activities" box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor.

Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Department required course activities (optional):	
Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	1. Apply the principles of turbine engine operation and thrust production during the maintenance and repair of aircraft turbine engines. • Perform operation of thrust reversers • Understand advantages of axial-flow compressors over centrifugal compressors • Determine results of excessive operating temperatures • Identify common turbine engine failures 2. Identify the principles of turbine engine component operation and their impact on the operation of the aircraft turbine engine and its auxiliary units. • Understand compressor surge control • Adjust fuel control devices • Identify causes of hot spots on combustion casing • Determine effects of exhaust nozzle adjustments 3. Research and Implement a strategy for accurate and timely maintenance of the overhaul of an aircraft turbine engine.

	• Utilize manufacturer manuals and FFA directives for turbine engines • Flag start and stop points throughout overhaul process 4. Perform the overhaul of an aircraft turbine engine, implementing the complete inspection of each component for compliance with appropriate regulations and airworthiness standards. • Understand the operating principles of a turbine engine • Identify relative gas pressure • Adjust exhaust cone • Adjust nozzle diaphragm • Identify types of combustion chambers • Remove and replace outer combustion case and liners • Disassemble compressor sections
Suggested Texts & Materials (specify if any texts or materials are required):	Aviation Maintenance Technician Handbook, Federal Aviation Administration; Introduction to Aircraft Maintenance, 3rd Edition, Avotek
Department Notes (optional)	

SECTION #2 FUNCTION OF COURSE WITHIN EXISTING AND/OR NEW PROGRAM(S)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☐ Yes ☒ No
Name of certificate(s):		# credit:
Name of degree(s):		# credit:
Will this new course be part of a new, proposed CGCC certificate or degree?		☒ Yes ☐ No
Name of new certificate(s):	Aviation Maintenance Technology	# credit: 96
Name of new degree(s):	Aviation Maintenance Technology AAS	# credit: 104
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	
Is this course used to supply related instruction for a certificate?		☐ Yes ☒ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.		

SECTION #3 ADDITIONAL INFORMATION FOR NEW CTE COURSES	
Transferability: Will this course transfer to another academic institution? Identify and describe the nature of the transfer.	CTE elective Comparable at Lane Community College

IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	No
Is there any potential impact on another department? Identify and consult with Department chairs whose courses may be impacted by this course, such as: content overlap, course duplication, prerequisite need, enrollment increase or decrease, etc.	☐ Yes ☒ No
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: 10/09/2020 ☐ No
Implementation term:	☒ Start of next academic year (summer term) ☐ Specific term (if BEFORE next academic year):
Course approval is dependent on approval of the related certificate/degree submission which documents the placement of the new course. Degree/certificate status will impact the speed of the process. The Curriculum Office will notify the submitter, department chair, and department director when the course has completed the approval process and is available to be scheduled. Curriculum changes generally go into effect at the beginning of the next academic year (summer term). Mid-year revisions/additions are discouraged but accommodated when possible if there is a specific, identifiable need.	

SECTION #4 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."		
Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	08-22-2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

NEXT STEPS:

CC date
CC decision
CC vote

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION			
Department:	CTE	Submitter name phone and email	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 273	Credits:	6
Course Title: (60 characters max, including spaces)	Aviation Maintenance: Powerplant 3	Transcript Title: (30 characters max, including spaces)	AM: Powerplant 3
May this course be repeated for credit?	☐ Yes ☒ No For how many times?	Contact hours:	Lecture: Lec/lab: 132 Lab:
Is this course equivalent to another? They must have the same description, outcomes and credit.		☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	To be included in the new Aviation Maintenance Technology certificate and degree.		

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☐	☐
Audit in consultation with faculty	☒	☐

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number: AMT 272	☒ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Covers reciprocating and turbine engine ignition system theories and overhaul practices, as well as the relationships of the complete ignition system to the powerplant and its operation. Covers proper inspection of the entire engine installation, including exhaust systems, airflow, and cooling systems. Prerequisites: AMT 272. Audit available.

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to:
	1. Safely perform aircraft reciprocating and turbine engine ignition system maintenance in accordance with the manufacturer service data, industry practices, and applicable regulations.
	2. Inspect and repair engine exhaust systems, including thrust reverser systems.
	3. Troubleshoot ignition and starting systems and related engine system discrepancies in accordance with the manufacturer service data, industry practices, and applicable regulations.
	4. Identify and repair engine airflow and temperature control malfunctions.
Outcomes assessment strategies:	Evaluations by exams, quizzes and lab work.

COURSE CONTENT, ACTIVITIES AND DESIGN

Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in "required activities" box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor.

Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Department required course activities (optional):	
Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	1. Safely perform aircraft reciprocating and turbine engine ignition system maintenance in accordance with the manufacturer service data, industry practices, and applicable regulations. • Identify ignition system and related components • Overhaul magneto and ignition harness • Measure capacity condenser and effect of incorrect capacity on ignition system • Locate and utilize data associated with ignition system components • Adjust spark plug electrodes 2. Inspect and repair engine exhaust systems, including thrust reverser systems. • Inspect and repair heat exchangers and superchargers • Examine carburetor air intake and induction manifolds • Apply methods to compensate for the unequal expansion rate of exhaust system • Address "frozen" ball joints in an exhaust system • Understand effect of exhaust gas leakage on system components

	3. Troubleshoot ignition and starting systems and related engine system discrepancies in accordance with the manufacturer service data, industry practices, and applicable regulations. • Inspect and repair turbine engine electrical starting system • Service turbine engine pneumatic starting system • Overhaul magneto and ignition harness • Measure capacity condenser and effect of incorrect capacity on ignition system • Determine continuity of ignition wiring • Practice precautions when working with high-energy ignition systems 4. Identify and repair engine airflow and temperature control malfunctions. • Test engine airflow and temperature control systems • Identify and repair defective components • Trouble shoot cause and effect of carburetor and induction system icing • Apply principles of operation and control of turbo superchargers and integral superchargers • Repair carburetor air intake and induction manifolds
Suggested Texts & Materials (specify if any texts or materials are required):	Aviation Maintenance Technician Handbook, Federal Aviation Administration; Introduction to Aircraft Maintenance, 3rd Edition, Avotek
Department Notes (optional)	

SECTION #2 FUNCTION OF COURSE WITHIN EXISTING AND/OR NEW PROGRAM(S)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☐ Yes ☒ No
Name of certificate(s):		# credit:
Name of degree(s):		# credit:
Will this new course be part of a new, proposed CGCC certificate or degree?		☒ Yes ☐ No
Name of new certificate(s):	Aviation Maintenance Technology	# credit: 96
Name of new degree(s):	Aviation Maintenance Technology AAS	# credit: 104
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	
Is this course used to supply related instruction for a certificate?		☐ Yes ☒ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.		

SECTION #3 ADDITIONAL INFORMATION FOR NEW CTE COURSES	
Transferability: Will this course transfer to another academic institution? Identify and describe the nature of the transfer.	CTE elective Comparable at Lane Community College
IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	No
Is there any potential impact on another department? Identify and consult with Department chairs whose courses may be impacted by this course, such as: content overlap, course duplication, prerequisite need, enrollment increase or decrease, etc.	☐ Yes ☒ No
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: 10/09/2020 ☐ No
Implementation term:	☒ Start of next academic year (summer term) ☐ Specific term (if BEFORE next academic year):
Course approval is dependent on approval of the related certificate/degree submission which documents the placement of the new course. Degree/certificate status will impact the speed of the process. The Curriculum Office will notify the submitter, department chair, and department director when the course has completed the approval process and is available to be scheduled. Curriculum changes generally go into effect at the beginning of the next academic year (summer term). Mid-year revisions/additions are discouraged but accommodated when possible if there is a specific, identifiable need.	

SECTION #4 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."		
Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	08-22-2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

CC date
CC decision
CC vote

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION				
Department:	CTE		Submitter name phone and email	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 274		Credits:	6
Course Title: (60 characters max, including spaces)	Aviation Maintenance: Powerplant 4		Transcript Title: (30 characters max, including spaces)	AM: Powerplant 4
May this course be repeated for credit?	☐ Yes ☒ No	For how many times?	Contact hours:	Lecture: Lec/lab: 132 Lab:
Is this course equivalent to another? They must have the same description, outcomes and credit.			☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	To be included in the new Aviation Maintenance Technology certificate and degree.			

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☐	☐
Audit in consultation with faculty	☒	☐

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number: AMT 273	☒ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Introduces the many methods of fuel metering used to move air and fuel into and through an engine in a ratio producing safe and efficient engine operation under widely varying conditions. Examines proper inspection of the entire engine installation, including exhaust and lubrication systems, propellers and unducted fans. Prerequisites: AMT 273. Audit available.

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)	
Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to: 1. Understand and apply the characteristics of aviation fuels, associated fuel systems, fuel metering methods and induction systems relative to engine/airframe installations. 2. Perform maintenance and inspection of fuel system, fuel metering, and induction systems using proper procedures and techniques. 3. Identify and apply all current manufacturer service information, and other airworthiness requirements during the performance of maintenance and inspection of aircraft fixed and variable pitch propellers. 4. Inspect and service engine lubrication systems.
Outcomes assessment strategies:	Evaluations by exams, quizzes and lab work.
COURSE CONTENT, ACTIVITIES AND DESIGN	
Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in "required activities" box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor. Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.	
Department required course activities (optional):	
Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	1. Understand and apply the characteristics of aviation fuels, associated fuel systems, fuel metering methods and induction systems relative to engine/airframe installations. • Identify aviation fuels and their properties • Understand function of fuel metering device • Inspect, service and repair engine fuel systems • Troubleshoot and adjust turbine engine fuel metering systems and electronic engine fuel controls 2. Perform maintenance and inspection of fuel system, fuel metering, and induction systems using proper procedures and techniques. • Overhaul carburetor • Repair engine fuel metering system components • Inspect, service, and repair reciprocating and turbine engine fuel metering systems • Repair heat exchangers • Repair turbine engine airflow and temperature control systems 3. Identify and apply all current manufacturer service information, and other airworthiness requirements during the performance of maintenance and

	inspection of aircraft fixed and variable pitch propellers. • Identify and select propeller lubricants • Balance propellers • Install, troubleshoot and remove propellers • Inspect and troubleshoot unducted fan system components • Detect and correct vertical and horizontal unbalance in a two-blade propeller • Determine the direction of rotation and install oil control plugs in governors • Understand the purpose and function of the parts of a propeller 4. Inspect and service engine lubrication systems. • Identify and select lubricants • Inspect, service and repair engine lubrication systems • Apply methods used to prevent excessive oil from accumulating in cylinders of radial engines • Identify location and function of oil temperature regulator • Identify factors that affect the oil consumption of a reciprocating engine • Explain the results of operating an engine using an incorrect lubricant
Suggested Texts & Materials (specify if any texts or materials are required):	Aviation Maintenance Technician Handbook, Federal Aviation Administration; Introduction to Aircraft Maintenance, 3rd Edition, Avotek
Department Notes (optional)	

SECTION #2 FUNCTION OF COURSE WITHIN EXISTING AND/OR NEW PROGRAM(S)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☐ Yes ☒ No
Name of certificate(s):		# credit:
Name of degree(s):		# credit:
Will this new course be part of a new, proposed CGCC certificate or degree?		☒ Yes ☐ No
Name of new certificate(s):	Aviation Maintenance Technology	# credit: 96
Name of new degree(s):	Aviation Maintenance Technology AAS	# credit: 104
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	
Is this course used to supply related instruction for a certificate?		☐ Yes ☒ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.		

SECTION #3 ADDITIONAL INFORMATION FOR NEW CTE COURSES	
Transferability: Will this course transfer to another academic institution? Identify and describe the nature of the transfer.	CTE elective Comparable at Lane Community College
IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	No
Is there any potential impact on another department? Identify and consult with Department chairs whose courses may be impacted by this course, such as: content overlap, course duplication, prerequisite need, enrollment increase or decrease, etc.	☐ Yes ☒ No
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: 10/09/2020 ☐ No
Implementation term:	☒ Start of next academic year (summer term) ☐ Specific term (if BEFORE next academic year):
Course approval is dependent on approval of the related certificate/degree submission which documents the placement of the new course. Degree/certificate status will impact the speed of the process. The Curriculum Office will notify the submitter, department chair, and department director when the course has completed the approval process and is available to be scheduled. Curriculum changes generally go into effect at the beginning of the next academic year (summer term). Mid-year revisions/additions are discouraged but accommodated when possible if there is a specific, identifiable need.	

SECTION #4 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."		
Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	08-22-2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

CC date
CC decision
CC vote

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION				
Department:	CTE		Submitter name phone and email	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 281		Credits:	3
Course Title: (60 characters max, including spaces)	Aviation Maintenance: Airframe Return to Service		Transcript Title: (30 characters max, including spaces)	AM: Airframe Return to Service
May this course be repeated for credit?	☐ Yes ☒ No	For how many times?	Contact hours:	Lecture: Lec/lab: 90 Lab:
Is this course equivalent to another? They must have the same description, outcomes and credit.			☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	To be included in the new Aviation Maintenance Technology certificate and degree.			

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☐	☐
Audit in consultation with faculty	☒	☐

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number: AMT 264	☒ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Provides diversified projects, supervised field experiences and FAA examination review for Airframe production. Prerequisite: AMT 264. Audit available.

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to: 1. Read, comprehend and apply FAA and manufacturer's aircraft maintenance specifications and data sheets. 2. Balance, rig and inspect flight control surfaces. 3. Utilize the skills that are expected of those entering the aviation maintenance industry as a certified Aircraft Mechanic with an airframe rating. 4. Make independent and accurate airworthiness judgments appropriate to Airframe Subject Area content.
Outcomes assessment strategies:	Evaluations by exams, quizzes and lab work.

COURSE CONTENT, ACTIVITIES AND DESIGN

Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in "required activities" box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor.

Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Department required course activities (optional):	
Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	1. Read, comprehend and apply FAA and manufacturer's aircraft maintenance specifications and data sheets. • Write maintenance record with description of work performed, aircraft discrepancies and corrective actions taken • Read, comprehend and apply information contained in FAA and manufacturer's maintenance specifications, data sheets and manuals • Complete maintenance forms and inspection reports • Read and apply technical data 2. Balance, rig and inspect flight control surfaces. • Measure control surface movement and adjust control stops • Install and rig cables in flight control system • Explain the relationship between specified movements of the cockpit controls and control surfaces • Complete required maintenance forms and records 3. Utilize the skills that are expected of those entering the aviation maintenance industry as a certified Aircraft Mechanic with an airframe rating. • Inspect and repair sheet metal structures

	• Assemble aircraft component • Understand hydraulic and pneumatic power systems. • Identify elements of fuel systems 4. Make independent and accurate airworthiness judgments appropriate to Airframe Subject Area content. • Perform airframe conformity and airworthiness inspections • Inspect, adjust, repair, replace, assemble and/or rig aircraft • Assemble aircraft components, including flight control surfaces • Complete inspection report including aircraft discrepancies and corrective actions
Suggested Texts & Materials (specify if any texts or materials are required):	N/A
Department Notes (optional)	

SECTION #2 FUNCTION OF COURSE WITHIN EXISTING AND/OR NEW PROGRAM(S)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☐ Yes ☒ No
Name of certificate(s):		# credit:
Name of degree(s):		# credit:
Will this new course be part of a new, proposed CGCC certificate or degree?		☒ Yes ☐ No
Name of new certificate(s):	Aviation Maintenance Technology	# credit: 96
Name of new degree(s):	Aviation Maintenance Technology AAS	# credit: 104
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	
Is this course used to supply related instruction for a certificate?		☐ Yes ☒ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.		

SECTION #3 ADDITIONAL INFORMATION FOR NEW CTE COURSES	
Transferability: Will this course transfer to another academic institution? Identify and describe the nature of the transfer.	CTE elective Comparable Lane Community College

IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	No
Is there any potential impact on another department? Identify and consult with Department chairs whose courses may be impacted by this course, such as: content overlap, course duplication, prerequisite need, enrollment increase or decrease, etc.	☐ Yes ☒ No
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: 10/09/2020 ☐ No
Implementation term:	☒ Start of next academic year (summer term) ☐ Specific term (if BEFORE next academic year):
Course approval is dependent on approval of the related certificate/degree submission which documents the placement of the new course. Degree/certificate status will impact the speed of the process. The Curriculum Office will notify the submitter, department chair, and department director when the course has completed the approval process and is available to be scheduled. Curriculum changes generally go into effect at the beginning of the next academic year (summer term). Mid-year revisions/additions are discouraged but accommodated when possible if there is a specific, identifiable need.	

SECTION #4 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."		
Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	08-22-2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

NEXT STEPS:

CC date
CC decision
CC vote

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION

Department:	CTE	Submitter name phone and email	Mary Kramer mkramer@cgcc.edu
Prefix and Course Number:	AMT 282	Credits:	3
Course Title: (60 characters max, including spaces)	Aviation Maintenance: Powerplant Return to Service	Transcript Title: (30 characters max, including spaces)	AM: Powerplant Return to Serv
May this course be repeated for credit?	☐ Yes ☒ No For how many times?	Contact hours:	Lecture: Lec/lab: 90 Lab:
Is this course equivalent to another? They must have the same description, outcomes and credit.		☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	To be included in the new Aviation Maintenance Technology certificate and degree.		

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☐	☐
Audit in consultation with faculty	☒	☐

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number: AMT 274	☒ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Provides diversified projects, supervised field experiences and FAA examination review for Powerplant operations. Prerequisite: AMT 274. Audit available.

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to: 1. Utilize the skills that are expected of those entering the aviation maintenance industry as a certified Aircraft Mechanic with an Powerplant rating. 2. Make independent and accurate airworthiness judgments appropriate to Powerplant Subject Area content. 3. When eligible, competently sit for the FAA written, oral and practical certification testing.
Outcomes assessment strategies:	Evaluations by exams, quizzes, lab and practical work.

COURSE CONTENT, ACTIVITIES AND DESIGN

Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in "required activities" box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor.

Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Department required course activities (optional):	
Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	1. Utilize the skills that are expected of those entering the aviation maintenance industry as a certified Aircraft Mechanic with an Powerplant rating. • Inspect and repair sheet metal structures • Assemble aircraft component • Understand hydraulic and pneumatic power systems. • Identify elements of fuel systems 2. Make independent and accurate airworthiness judgments appropriate to Powerplant Subject Area content. • Perform airframe conformity and airworthiness inspections • Inspect, adjust, repair, replace, assemble and/or rig aircraft • Identify manufacturer engine service resources • Research FAA airworthiness requirements • Read and interpret service information and airworthiness requirements for application 3. When eligible, competently sit for the FAA written, oral and practical certification testing.

Suggested Texts & Materials (specify if any texts or materials are required):	N/A
Department Notes (optional)	

SECTION #2 FUNCTION OF COURSE WITHIN EXISTING AND/OR NEW PROGRAM(S)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☐ Yes ☒ No
Name of certificate(s):		# credit:
Name of degree(s):		# credit:
Will this new course be part of a new, proposed CGCC certificate or degree?		☒ Yes ☐ No
Name of new certificate(s):	Aviation Maintenance Technology	# credit: 96
Name of new degree(s):	Aviation Maintenance Technology AAS	# credit: 104
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	
Is this course used to supply related instruction for a certificate?		☐ Yes ☒ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.		

SECTION #3 ADDITIONAL INFORMATION FOR NEW CTE COURSES	
Transferability: Will this course transfer to another academic institution? Identify and describe the nature of the transfer.	CTE elective Comparable Lane Community College
IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	No

Is there any potential impact on another department? Identify and consult with Department chairs whose courses may be impacted by this course, such as: content overlap, course duplication, prerequisite need, enrollment increase or decrease, etc.	☐ Yes ☒ No
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: 10/09/2020 ☐ No
Implementation term:	☒ Start of next academic year (summer term) ☐ Specific term (if BEFORE next academic year):
Course approval is dependent on approval of the related certificate/degree submission which documents the placement of the new course. Degree/certificate status will impact the speed of the process. The Curriculum Office will notify the submitter, department chair, and department director when the course has completed the approval process and is available to be scheduled. Curriculum changes generally go into effect at the beginning of the next academic year (summer term). Mid-year revisions/additions are discouraged but accommodated when possible if there is a specific, identifiable need.	

SECTION #4 DEPARTMENT REVIEW

"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean."

Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	08-22-2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or HST 104). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu.
2. Refer to the curriculum office website for the Curriculum Committee meeting schedule and submission deadlines. You are encouraged to send submissions prior to the deadline so that the curriculum office may review and provide feedback.
3. Course submissions will be placed on the next agenda with available time slots. You will be notified of your submission's time for review, and you will be sent a signature page that may be completed electronically or manually by your department chair and department dean. It is the submitter's responsibility to ensure that completed signature pages are delivered to the Curriculum Office the day before the Curriculum Committee meeting for which the submission is scheduled. Submissions without signed signature pages will be postponed.

CC date	_____
CC decision	_____
CC vote	_____

Columbia Gorge Community College

NEW DEGREE REQUEST Check one: ☒ AAS ☐ AS ☐ AAOT major ☐ ASOT

Submitted by: Mary Kramer	Email: mkramer@cgcc.edu	Phone: 541-506-6033	Department: CTE

(Double click on check boxes to activate dialog box)

SECTION #1 OVERVIEW

Proposed Title:	Aviation Maintenance Technology		Proposed Credits:	104
Reason for new degree:	According to Boeing's Pilot & Technician Outlook report for the period of 2019-2038, 769,000 new maintenance technicians will be needed globally over the next 20 years and 193,000 within the US alone. Currently, the number of mechanics retiring will outpace those entering the profession. The average age of today's mechanic is 51. The Bureau of Labor Statistics and Oregon Employment Department estimate current Oregon Aviation Maintenance jobs to be approximately 1,440 with a projected increase of 13%, Portland area jobs by 15%, and Columbia Gorge jobs by 12%. The college has support and encouragement to develop this program from the City of The Dalles, Port of The Dalles, Columbia Gorge Regional Airport, Wasco and Klickitat Counties, as well as local patrons. Wage estimates range from $56,000-$63,000 per year, however, experienced mechanics can make over $100,000 annually.		Requested implementation term:	Summer, 2021
Is there impact on other areas of instruction?	☐ Yes ☒ No	Explanation of issues and how they are being resolved:	Has the degree been validated by the Advisory Committee?	☐ Yes ☒ No
If yes, have you talked with impacted departments and resolved any and all possible issues?	☐ Yes ☐ No		Date of Advisory Committee meeting:	Official Advisory Committee not formed yet.

Is this a Statewide Degree?	☐ Yes ☒ No	If so, has the degree been approved by the consortium?	☐ Yes ☐ No
Are there Related Certificates or Career Pathways associated with this degree?	☒ Yes ☐ No	If so, list all: Aviation Maintenance Technology	

SECTION #2 REQUISITES AND OUTCOMES

Note that degree/certificate/program entry prerequisites are only enforceable in limited entry programs. Program prerequisites for open entry programs only have meaning when they are representative of prerequisites associated to specific courses within the program. Prerequisites that students are not able to test out of using Next Gen Accuplacer result in hidden degree/certificate requirements and should be avoided. (Courses that may be tested out of using Next Gen Accuplacer include: RD 90, RD 115, WR 90, WR 115, MTH 20, MTH 60, MTH 65, MTH 95, MTH 98, MTH 105, MTH 111, MTH 112.)

PROPOSED PRE and/or COREQUISITES

Course Number	Course Title or Placement level	Requisites	Credits
WR 115	Introduction to Expository Writing	Placement into WR 115 or completion of WR 90 and placement into RD 115 or completion of RD 90	4
RD 115	Critical Reading	Placement into RD 90	4
MTH 65 or MTH 98	Beginning Algebra II or Quantitative Math or equivalent placement test scores	MTH 60 or equivalent placement test scores	4
Is this a limited entry program? Students must apply, via the department for program entry.			☐ Yes ☒ No

PROPOSED OUTCOMES

Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

Students who successfully complete this degree will be able to:

1. Service, maintain, troubleshoot and repair airplanes and rotorcraft.
2. Perform proficient, entry-level aviation maintenance skills.
3. Apply knowledge of FAA regulations and industry standards.
4. Apply math and physics principles in solving problems associated with aviation maintenance.
5. Communicate effectively verbally and in writing.

6. Use critical thinking and problem solving skills to identify and resolve aviation maintenance issues.
7. Work effectively in a team and/or group setting.
8. Sit for the Federal Aviation Administration (FAA) certification exams (written, oral and practical) for the airframe and powerplant (A&P) airman certificate.

SECTION #3 PROPOSED COURSEWORK

All candidates for the Associate of Applied Science (AAS) Degree must complete 16 credits of General Education from the General Education/Discipline Studies list. The categories are: 1) Arts and Letters, 2) Social Science, and 3) Science/Math/Computer Science. These credits must include at least one course from each category and no more than two courses or eight credits from any one category. For information regarding Gen Ed requirements for the AS and for AAOT majors, please contact the Curriculum Office.

List all courses in the term by term order that is to be displayed in the catalog degree map. Include elective list below. The information you provide on this form will be reflected in the CGCC catalog pages. Please ensure it is correct. (If you need more lines to accommodate the courses, right click and insert rows.)

Course Number	Course Title	Requisites	Credits
Summer			
WR 121	English Composition	Placement into or completion of WR 115 and RD 115	4
PSY 101	Psychology and Human Relations	MTH 20 or test; Prereq/concurrent WR 121	4
MTH 105 or higher	Math in Society	MTH 65 or MTH 98 or equivalent placement score	4
Fall			
AMT 191	Aviation Maintenance: General 101	MTH 65	6
AMT 192	Aviation Maintenance: General 102	AMT 191	6
AMT 193	Aviation Maintenance: General 103	AMT 192	6
AMT 194A	Aviation Maintenance: General 104A	AMT 193	3
Winter			
AMT 194B	Aviation Maintenance: General 104B	Pre/co: AMT 194A	3
AMT 195	Aviation Maintenance: General 105	AMT 194 or AMT 194A & 194B	6
AMT 261	Aviation Maintenance: Airframe 1	MTH 65, AMT 105	6
AMT 262	Aviation Maintenance: Airframe 2	AMT 261	6
Spring			
AMT 263	Aviation Maintenance: Airframe 3	AMT 262	6
AMT 264	Aviation Maintenance: Airframe 4	AMT 263	6
AMT 271	Aviation Maintenance: Powerplant 1	MTH 65, AMT 105	6
AMT 281	Aviation Maintenance: Airframe Return to Service	AMT 264	3

Summer			
AMT 272	Aviation Maintenance: Powerplant 2	AMT 271	6
AMT 273	Aviation Maintenance: Powerplant 3	AMT 272	6
AMT 274	Aviation Maintenance: Powerplant 4	AMT 273	6
AMT 282	Aviation Maintenance: Powerplant Return to Service	AMT 274	3
Fall			
	Arts & Letters Gen Ed	MTH 20 or test; Prereq/concurrent WR 121	4
	Gen Ed (from any Gen Ed discipline area)	MTH 20 or test; Prereq/concurrent WR 121	4
		Credit total	104

ELECTIVES (if applicable)			
Course Number	**Course Title**	**Requisites**	**Credits**
	None		

SECTION #4 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Degree or Certificate Signature Form signed by the department chair and dean."		
Submitter	Email	Date
Mary Kramer	mkramer@cgcc.edu	10/8/2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

Next steps:

1. Save the completed New Degree Request Form and submit as an e-mail attachment to curriculum@cgcc.edu or slewis@cgcc.edu.
2. Refer to the curriculum office website for the Curriculum Committee meeting schedule and submission deadlines. You are encouraged to send submissions prior to the deadline so that the Curriculum Office may review and provide feedback.
3. Submissions will be placed on the next agenda with available time slots. You will be notified of your submission's time for review, and you will be sent a signature page that may be completed electronically or manually by your department chair and department dean. It is the submitter's responsibility to ensure that completed signature pages are delivered to the Curriculum Office the day before the Curriculum Committee meeting for which the submission is scheduled. Submissions without signed signature pages will be postponed.
4. It is required for a representative to attend the Curriculum Committee meeting in which your submission is scheduled for review. The representative will be asked to describe the proposal and respond to any committee questions. Unanswered questions may result in a submission being rescheduled for further clarification.

CC date	_____
CC decision	_____
CC vote	_____

Columbia Gorge Community College

NEW CERTIFICATE REQUEST

Submitted by: Mary Kramer	Email: mkramer@cgcc.edu	Phone: 541-506-6033	Department: CTE

(Double click on check boxes to activate dialog box)

SECTION #1 OVERVIEW

Proposed Title:	Aviation Maintenance Technology		Proposed Credits:	96
Reason for new certificate:	According to Boeing's Pilot & Technician Outlook report for the period of 2019-2038, 769,000 new maintenance technicians will be needed globally over the next 20 years and 193,000 within the US alone. Currently, the number of mechanics retiring will outpace those entering the profession. The average age of today's mechanic is 51. The Bureau of Labor Statistics and Oregon Employment Department estimate current Oregon Aviation Maintenance jobs to be approximately 1,440 with a projected increase of 13%, Portland area jobs by 15%, and Columbia Gorge jobs by 12%. The college has support and encouragement to develop this program from the City of The Dalles, Port of The Dalles, Columbia Gorge Regional Airport, Wasco and Klickitat Counties, as well as local patrons. Wage estimates range from $56,000-$63,000 per year, however, experienced mechanics can make over $100,000 annually.		Requested implementation term:	Summer, 2021
Is there impact on other areas of instruction?	☐ Yes ☒ No	Explanation of issues and how they are being resolved:	Has the certificate been validated by the Advisory Committee?	☐ Yes ☒ No
If yes, have you talked with impacted departments and resolved any and all possible issues?	☐ Yes ☐ No		Date of Advisory Committee meeting:	Official Advisory Committee not formed yet.

Is this a Statewide Certificate?	☐ Yes ☒ No	If so, has the certificate been approved by the consortium?	☐ Yes ☐ No
Is this a Related Certificate?	☒ Yes ☐ No	Is this a Career Pathway?	☐ Yes ☒ No
If this is a Related Certificate or a Career Pathway, what is the base degree?	Aviation Maintenance Technology AAS		

SECTION #2 PREREQUISITES AND OUTCOMES

Note that degree/certificate/program entry prerequisites are only enforceable in limited entry programs. Program prerequisites for open entry programs only have meaning when they are representative of prerequisites associated to specific courses within the program. Prerequisites that students are not able to test out of using Next Gen Accuplacer result in hidden degree/certificate requirements and should be avoided. (Courses that may be tested out of using Next Gen Accuplacer include: RD 90, RD 115, WR 90, WR 115, MTH 20, MTH 60, MTH 65, MTH 95, MTH 98, MTH 105, MTH 111, MTH 112.)

PROPOSED PRE and/or COREQUISITES

Course	Course Title or Placement level	Requisites	Credits
WR 115	Introduction to Expository Writing	Placement into WR 115 or completion of WR 90 and placement into RD 115 or completion of RD 90	4
RD 115	Critical Reading	Placement into RD 90	4
MTH 65 or MTH 98	Beginning Algebra II or Quantitative Math or equivalent placement test scores	MTH 60 or equivalent placement test scores	4
Is this a limited entry program? Students must apply, via the department for program entry.			☐ Yes ☒ No

PROPOSED OUTCOMES

Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

Students who successfully complete this certificate will be able to:

1. Service, maintain, troubleshoot and repair airplanes and rotorcraft.
2. Perform proficient, entry-level aviation maintenance skills.
3. Apply knowledge of FAA regulations and industry standards.
4. Think critically, problem solve, and communicate effectively.
5. Apply math and physics principles in solving problems associated with aviation maintenance.

6. Work effectively in a team and/or group setting.
7. Sit for the Federal Aviation Administration (FAA) certification exams (written, oral and practical) for the airframe and powerplant (A&P) airman certificate.

SECTION #3 PROPOSED COURSEWORK

List all courses (course number, title, requisites and credits) in the term by term order that is to be displayed in the catalog certificate map. Enter electives below if applicable. The information you provide on this form will be reflected in the CGCC catalog pages. Please ensure it is correct. (If you need more lines to accommodate the courses, right click and insert rows.)

Course Number	Course Title	Requisites	Credits
Summer			
WR 121	English Composition	Placement into WR 121 or completion of WR 115 and RD 115	4
PSY 101	Psychology and Human Relations	MTH 20 or test; Prereq/concurrent WR 121	4
MTH 105	Math in Society	MTH 65 or MTH 98 or equivalent placement test scores	4
Fall			
AMT 191	Aviation Maintenance: General 101	MTH 65	6
AMT 192	Aviation Maintenance: General 102	AMT 191	6
AMT 193	Aviation Maintenance: General 103	AMT 192	6
AMT 194A	Aviation Maintenance: General 104a	AMT 193	3
Winter			
AMT 194B	Aviation Maintenance: General 104b	Pre/co: AMT 194A	3
AMT 195	Aviation Maintenance: General 105	AMT 194 or AMT 194A & 194B	6
AMT 261	Aviation Maintenance: Airframe 1	MTH 65, AMT 105	6
AMT 262	Aviation Maintenance: Airframe 2	AMT 261	6
Spring			
AMT 263	Aviation Maintenance: Airframe 3	AMT 262	6
AMT 264	Aviation Maintenance: Airframe 4	AMT 263	6
AMT 271	Aviation Maintenance: Powerplant 1	MTH 65, AMT 105	6
AMT 281	Aviation Maintenance: Airframe Return to Service	AMT 264	3
Summer			
AMT 272	Aviation Maintenance: Powerplant 2	AMT 271	6
AMT 273	Aviation Maintenance: Powerplant 3	AMT 272	6
AMT 274	Aviation Maintenance: Powerplant 4	AMT 273	6
AMT 282	Aviation Maintenance: Powerplant Return to Service	AMT 274	3
		Credit total	96

ELECTIVES (if applicable)			
Course Number	**Course Title**	**Requisites**	**Credits**
	None		

SECTION #4 RELATED INSTRUCTION

Certificates 45 credits or more require related instruction. Fill out a Template for Related Instruction located on the Curriculum web page.
All courses identified as fulfilling the embedded related instruction requirement must have been reviewed and recommended by the Curriculum Committee and the details outlined on the CCOG.

SECTION #5 DEPARTMENT REVIEW

"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Degree or Certificate Signature Form signed by the department chair and dean."

Submitter	Email	Date
Mary Kramer	mkamer@cgcc.edu	10/8/2020
Department Chair (enter name of department chair): Jim Pytel		
Department Dean (enter name of department dean): Mary Kramer		

Next steps:

1. Save the completed Certificate Request Form and submit as an e-mail attachment to curriculum@cgcc.edu or slewis@cgcc.edu.
2. If needed, attach the completed Related Instruction Template to the same e-mail.
3. Refer to the Curriculum Office website for the Curriculum Committee meeting schedule and submission deadlines. You are encouraged to send submissions prior to the deadline so that the Curriculum Office may review and provide feedback.
4. Submissions will be placed on the next agenda with available time slots. You will be notified of your submission's time for review, and you will be sent a signature page that may be completed electronically or manually by your department chair and department dean. It is the submitter's responsibility to ensure that completed signature pages are delivered to the Curriculum Office the day before the Curriculum Committee meeting for which the submission is scheduled. Submissions without signed signature pages will be postponed.
5. It is required for a representative to attend the Curriculum Committee meeting in which your submission is scheduled for review. The representative will be asked to describe the proposal and respond to any committee questions. Unanswered questions may result in a submission being rescheduled for further clarification.

Template for Related Instruction in Certificates

61 to 108 credits

Aviation Maintenance Technology

Enter course information in light yellow areas (totals will be automatically calculated)

Subject Code	Course Number	Course Title	Credits	Hours	Related instruction Hours in: Computation	Communication	Human Relations	Total RI
Example: BKT	*101*	*Basket Weaving Basics*	*4*	*120*	*6*	*12*	*8*	***26***
courses used for embedded related instruction								
AMT	191	AM: General 101	6	180	31.50			***31.50***
AMT	192	AM: General 102	6	180	21.00			***21.00***
AMT	193	AM: General 103	6	180	48.00			***48.00***
AMT	263	AM: Airframe 3	6	180	19.50			***19.50***
				0				*No RI*
				0				*No RI*
courses used for stand-alone related instruction								
WR	121	English Composition	4	120		120.00		***120.00***
PSY	101	Psych & Human Relations	4	120			120.00	***120.00***
MTH	105	Math in Society	4	120	120.00			***120.00***
		Totals	**36**	**1080**	**240.00**	**120.00**	**120.00**	**480.00**
		Minimum for 2 yr certificate:			96.00	96.00	96.00	**480.00**
		Remaining to meet Min. Requirement:			0.00	0.00	0.00	0.00

	YES	NO
All courses identified as embedded related instruction are approved by the curriculum committee for RI?		
Related instruction instructor qualification forms are filed with the Vice President of Instructional Services?		

Associate of Science Oregon Transfer
Business
90 credit minimum

The Associate of Science Oregon Transfer—Business (ASOT—BUS) degree is designed for students planning to transfer credits to any Oregon public university, and seek entry into that institution's business school program. Students completing the ASOT—BUS degree will have met the lower-division general education requirements of the institution's baccalaureate degree programs. Students transferring will have junior status for registration purposes.

Admission to the business school program of a public university is not guaranteed upon completion of the ASOT—BUS. It is strongly recommended that students contact the business school program of the school they intend to transfer to early in the first term of their ASOT—BUS program to be advised of additional requirements. Students should also meet with a CGCC Academic advisor.

Candidates for the ASOT—BUS must satisfy the General Education Requirements and Associate Degree Comprehensive Requirements and Limits as established on pages 12-13 and meet all the degree-specific requirements listed here.

Degree-Specific Requirements

- Associate Degree Comprehensive Requirements and Limits, see pages 12-13.
- Each course must be completed with a "C" or better.
- BA 101, 211, 212, 213 and 226. BA 226 may be replaced by any other faculty-approved 200-level BA course.
- A minimum of 20 BA credits are required for the ASOT—BUS degree.

General Education Requirements

Students must complete at least 11 discipline studies courses from the General Education Electives List on pages 14-15. All courses in discipline studies must be a minimum of three credits. A course may count towards foundational requirements or discipline studies, but not both.

- Arts & Letters: complete three courses from at least two disciplines.
- Social Sciences: Complete four courses from at least two disciplines; two courses must be microeconomics and macroeconomics.
- Science, Mathematics, and Computer Science: Complete four courses from at least two subject areas (including three laboratory courses in biological and/or physical science).
- Cultural Literacy: Select one course from any course designated as meeting the cultural literacy requirement on pages 14-15. This course may be one of the required discipline studies courses.

Elective Credit Requirements

- All candidates must complete additional elective or university specific prerequisite courses for a minimum of 90 credits. Elective courses may be any number of credits.
- A maximum of 12 credits of CTE courses may be applied (may not include the career technical required coursework in the degree).
- A maximum of three credits of physical education (PE) may be applied to this degree.

Core Requirements

Requirements	Credits	Courses which satisfy requirements
Writing	8	WR 121 and either WR 122 or WR 227. A student must have at least eight credits of Writing.
Mathematics	12	A minimum of three courses MTH 111 or higher for which Intermediate Algebra is a prerequisite. One course must be Statistics.
Oral Communications	3	COMM 111, 140, 214, 215
Computer Applications	8	BA 131 or CAS 133 or CAS 170 or 270.

ASSOCIATE OF SCIENCE OREGON TRANSFER - BUSINESS (ASOT–BUSINESS)

Oregon Administrative Rule 589-006-0050(7) (https://secure.sos.state.or.us/oard/viewSingleRule.action?ruleVrsnRsn=248692) defines the Associate of Science (AS) degree as a state approved associate degree that is intended to prepare students to transfer into an upper division baccalaureate degree program in such areas as Business, Science, Mathematics and Engineering. The Associate of Science degree is often designed to meet the requirements of a specific receiving institution.

Any student who holds an Oregon community college Associate of Science Oregon Transfer degree in Business (ASOT–Business) that conforms to the guidelines set forth below, and transfers to any Oregon Public University, will have met the lower division general education requirements of that university.

Grade point average requirements for entry into the university's major are not necessarily satisfied by the ASOT–Business degree. Once admitted to the university and the Business program, however, students transferring under this agreement will have junior standing for both for the Business major and for university registration purposes.

Background and Intent

The ASOT–Business degree was created in 2003 through collaboration between Oregon community college faculty and administration and Oregon public university business department chairs and deans, to begin an exploration of offering statewide Associate of Science degrees. Like the AAOT (Associate of Arts Oregon Transfer degree) the intention is to recognize lower division coursework, but in this case coursework taken by students intending to major in business.

Any student holding the Associate of Science Oregon Transfer–Business degree recognized on an official college transcript will have met the lower division General Education requirements of baccalaureate degree programs of any Oregon public university.

Students transferring under this agreement will have junior status for registration purposes. Course, class standing, or GPA requirements for specific majors, departments, or schools are not necessarily satisfied by an ASOT–Business degree.

General Guidelines

- A student must complete a total of 90 quarter credits to be awarded the ASOT–Business.
- All courses should be aligned with the student's intended program of study and the degree requirements of the baccalaureate institution to which the student plans to transfer. A student is encouraged to work with an advisor in the selection of courses within the ASOT–Business degree for alignment to the institution the student intends to transfer.
- All Foundational Requirements and Discipline Studies courses must be a minimum of 3 credits. All Elective courses may be any number of credits.
- All courses must be passed with a grade of "C-" or better. Students must have a minimum cumulative GPA of 2.0 at the time the ASOT–Business is awarded.

General Requirements

- **Writing:** Students taking writing courses of three credits each must take WR121, WR122, and WR227. Students taking writing classes of four credits each must take WR121 and either WR122 or WR227. Information Literacy will be included in the writing requirement.
- **Oral Communication:** One course in the fundamentals of speech or communication designated by the college as meeting the statewide criteria for speech communication.
- **Mathematics:** A minimum of three courses for which Intermediate Algebra is a prerequisite, including one course in statistics.
- **Computer Applications:** Proficiency in word-processing, spreadsheet, database, and presentation software as demonstrated by successful completion of applicable courses.

Distribution Requirements

- **Arts and Letters:** Three courses chosen from two or more disciplines.
- **Social Sciences:** Four courses chosen from two or more disciplines, with a minimum of two courses in "principles of economics" (to include microeconomics and macroeconomics) at the 200 level. The courses in economics must be completed with a grade of "C-" or better.
- **Science:** Four courses from at least two disciplines including at least three laboratory courses in biological and/or physical science.
- **Cultural Literacy:** Students must select one course from any of the discipline studies that is designated as meeting the statewide criteria for cultural literacy.

Special note: The remainder of the degree outline, specifically the business-specific requirements and the electives and/or university specific prerequisites (updated as needed), have not changed from the original curricular outline.

Electives

- Electives will comprise up to 13 credits depending on the student's selection of courses to meet the requirements above.

Notes and Clarifications

1. Courses that are developmental in nature, designed to prepare students for college transfer courses, are not applicable to this degree.
2. Courses used to meet the "Distribution Requirements" should be at least 3 credits each.
3. In Arts and Letters, the second year of a foreign language may be included, but not the first year. American Sign Language is considered a foreign language.
4. Oregon public universities may have requirements/recommendations specific to potential majors. Please see Appendix F - ASOT-Business University-Specific Electives (/handbook/appendices/appendix-j---asot---business) of this *Handbook*.
5. All colleges are pre-approved to offer this degree.

Adopted by Joint Boards Articulation Commission November 2011; Approved State Board of Education May 2012.

Prior Guidelines (provided for purpose of student completion)

An Associate of Science/Oregon Transfer degree in Business (AS/OT-Bus), offered by any Oregon community college, shall meet the guidelines listed below.

- 90 -108 credits is required for the degree, and of these
- At least 62-65 credits shall conform to the general education and distribution requirements listed below, and

General Requirements

- *Writing:* A minimum of eight credits of college transfer writing courses, with a grade of "C-" or better in each course. Designated courses are WR 121, 122, 123 or 227.
- *Oral Communication/Rhetoric:* A minimum of three credits of a fundamentals of speech or communication course with a grade of "C-" or better.
- *Mathematics:* A minimum of twelve credits of college level mathematics with a grade of "C-" or better. Math 111 or above with a minimum of four credits in statistics.
- *Computer Applications:* Three to six credits. Proficiency in word processing, spreadsheet, database, and presentation software demonstrated by successful completion of applicable courses.

Distribution Requirements

- *Arts and Letters:* A minimum of twelve credits, chosen from at least two disciplines.
- *Social Sciences:* A minimum of twelve credits, and shall include Microeconomics and Macroeconomics (8 credits minimum) at the 200 level. Courses in Economics must be completed with a C or better.
- *Science:* A minimum of twelve credits of laboratory courses in the biological or physical sciences.

Business Specific Requirements

- A minimum of twenty credits in Business.
- Each course in this section must be completed with a grade of "C" or better. Required courses are:
  - BA 101: Introduction to Business
  - BA 211, 213: Financial, Managerial Accounting
  - BA 131: Business Data Processing
  - BA 226/230: Business Law (or other advisor approved Business course elective)

Electives

Electives will comprise up to 13 credits depending on the student's selection of courses to meet the requirements above.

Notes

1. Courses that are developmental in nature, designed to prepare students for college transfer courses, are not applicable to this degree.
2. Courses used to meet the "Distribution Requirements" should be at least 3 credits each.
3. In Arts and Letters, the second year of a foreign language may be included, but not the first year. ASL is considered a foreign language.
4. Oregon University System institutions may have requirements/recommendations specific to potential majors. Please see Appendix F - ASOT-Business University-Specific Electives (/handbook/appendices/appendix-j---asot---business) in this *Handbook*.

GENERAL PROGRAM REQUIREMENTS

Columbia Gorge Community College confers six associate degrees:

- Associate of Arts Oregon Transfer (AAOT)
- Associate of Science Oregon Transfer—Business (ASOT—BUS)
- Associate of Science Oregon Transfer—Computer Science (ASOT—CS)
- Associate of Science (AS)
- Associate of General Studies (AGS)
- Associate of Applied Science (AAS)

In addition, CGCC offers numerous certificates in career and technical education programs. The choices students make will depend on their major and their goals following graduation. All of the degrees have some requirements in common.

Prerequisites, limits, and general degree requirements are listed in the following paragraphs.

Course Prerequisites

All degree candidates must demonstrate competency in basic mathematics and writing skills prior to receiving their degree. Most Lower Division Collegiate courses have a standard prerequisite:

- Math: Successful completion ("C" or better) of MTH 20, or placement into MTH 60
- Writing: Successful completion ("C" or better) of WR 121 or concurrent enrollment

Successful completion of any prerequisite requires passing with a "C" or better, or a "P." A grade of "D," "F," or "NP" will not satisfy the requirement. Some courses may have higher requirements in these areas and/or additional prerequisites as appropriate. See individual course prerequisites. Instructors may waive prerequisites on a case-by-case basis. Students who have one of the following degrees from a U.S. regionally accredited institution: AA, AS, AGS, AAS, BA, BS and higher will have the basic competency in writing (WR 121) waived. Other writing requirements specified by the program remain in effect.

Minimum Requirements

Students earning an associate degree must successfully complete the following comprehensive requirements along with any additional requirements specific to individual associate degrees:

- *Minimum Credits.* All candidates must earn a minimum of 90 credits toward an associate degree. Credit courses numbered below 100 cannot be used to fulfill the 90 credit minimum requirement for any degree.
- *Minimum Grade Point Average.* All candidates for a degree must have at least a 2.0 minimum cumulative grade point average ("C" average).
- *Minimum Residency.* All degree candidates must accumulate at least 30 credits of satisfactory work at CGCC to establish residency. Non-traditional credit, credit transferred from another institution or challenge credit may not be used to establish residency.
- Twenty-four of the credits earned at CGCC must apply to the specific associate degree requirements the student is pursuing.

Associate Degree Comprehensive Requirement Limits

- A maximum of three credits of physical education courses may be used as electives, except for the Associate of General Studies, which may include six credits.
- Credit courses with passing grades may only be applied once in meeting a degree or certificate requirement (unless approved to be repeated). In addition, repeated courses are only counted once in accumulated hour and point totals.
- No more than 12 credits of Cooperative Education courses may be used.
- No more than nine credits of experimental courses may be used (course numbers 199-199Z and 299-299Z).
- A maximum of 24 credits of "P" (pass) grades will apply to any degree. Specific AAS degrees that deviate from this maximum will state the degree maximum in the degree requirements for the specific AAS degree.
- One-credit Management/Supervisory Development (MSD) workshops may only be applied to the Associate of General Studies Degree (maximum six credits).

Certificate Requirements—One Year Certificates

Certificates at CGCC ranging from 45-60 credits are awarded in several programs to students who complete the course of study with a minimum 2.0 grade point average. Specific courses required for each certificate program, including any General Education requirements, are listed under their appropriate programs.

- Credit courses numbered below 100 may not be used to fulfill the credit minimum requirements for certificates.
- At least 12 credits must be earned at CGCC, eight of which must apply to the certificate requirements. The final eight credits must be earned at CGCC.
- A maximum of 12 credits of "P" (pass) grades will apply. Some certificate requirements may vary and will be listed in that specific certificate.
- No more than 12 credits of Cooperative Education courses may apply to any one-year certificate.
- Only nine credits of 199 and 299 experimental courses apply.

Certificate Requirements—Less-Than-One-Year Certificates

- Certificates at CGCC ranging from 12-44 credits are awarded in several programs to students who complete the course of study with a minimum 2.0 grade point average. Specific courses required for each certificate program, including any General Education requirements, are listed under their appropriate programs.
- At least six credits must be earned at CGCC, all of which must apply to the certificate requirements.
- A maximum of eight credits of Pass/No Pass grades will apply. Specific less-than-one-year certificates that deviate from this maximum will state their Pass/No Pass maximum in the requirements for that specific certificate.
- Only nine credits of 199 and 299 experimental courses apply.

Career Pathway Certificates

Career Pathway Certificates are short-term credentials (12-44 credits) which prepare individuals for entry-level employment within an occupational area. Career Pathway Certificates may be the first certificate a student earns while pursuing a certificate of greater length or an Associate of Applied Science degree. Information about Career Pathways in specific areas of study can be found in the program section of the catalog. Based upon credits, career pathway certificates need to meet less-than-one-year requirements.

Computer Proficiency: A Statement to Students

In order to succeed on campus and in the world beyond college, students need to be familiar with and capable of using computers and computer software. Both upper division college work and the requirements of the workplace demand such skills. Many CGCC faculty will require students to access class materials on the Internet, or use word processing, email and databases as part of regular course activities. Students should contact their academic advisor to find out what computer resources and courses are available to help them achieve computer proficiency.

Three-to-Four Credit Conversion

Some lower division collegiate courses (LDC) have changed to four credits. For degrees and certificates requiring specific LDC courses, the three credit version of the same course is generally accepted. Comprehensive degree and certificate minimum requirements must be met.

Course Repetition

It is possible to repeat a class only in certain circumstances as follows:

- The course has been identified as eligible for repetition as noted in the course description in the catalog; or
- To receive a higher grade:
  - Students are limited to three (3) total enrollments for most credit courses. Students will not be allowed to repeat a course more than three times without documented evidence of extenuating circumstances. “W” grades are counted as enrollments.
  - Students who receive substandard grades (“D”, “F”, “NP” or “I”) and/or one or more withdrawal (“W”) may attempt to successfully complete the course up to a total of two additional times at Columbia Gorge Community College, if necessary to alleviate the substandard grade or successfully complete the course.

Appealing after the third attempt:

- After the third attempt to receive a passing grade in a course, the student may appeal to the Registrar’s Office for one additional attempt. Appeals are only considered for documented extenuating circumstances. Students who withdraw and receive a “W” on each of the three allowable attempts will not be able to withdraw from the course again, if granted an additional attempt through appeal, and a letter grade will be transcripted. NO FURTHER ATTEMPTS WILL BE PERMITTED.

Experimental Courses

Courses numbered 99, 199, and 299 are experimental in nature. These courses may be offered twice in a 15-month period. After that time, they are either converted to a regular number course or inactivated. While these courses count for graduation, they may not transfer to other institutions.

Non-Credit Courses

CGCC offers a number of non-credit courses for personal and career advancement, listed as “Community Education,” as well as continuing education classes for professionals in several areas. See the quarterly Class Schedule for a list of courses and registration information. Non-credit courses do not apply to any degrees or certificates.

Effective Catalog

CGCC operates on the quarter system. Catalog requirements are effective for six academic years. Students may graduate under the catalog requirements existing at the time of initial enrollment as long as they successfully complete at least one CGCC credit applicable to degree requirements per academic year. A new academic year begins with each summer term and ends the next spring term. No catalog is valid for longer than spring term following the sixth academic year after issuance of the catalog.

Some programs may impose shorter time limits on accepting credits for degree or certificate requirements. Students enrolled in programs that are accredited or licensed must meet the requirements most recently approved by the accrediting agency or licensing authority. All returning students who have not been enrolled in a college credit course for one academic year must meet new degree requirements. Occasionally, the college may change courses and course numbers within a program. Students should regularly consult an advisor in their major department about their course of study.

Technical Math

Course Number: MTH 110
Transcript Title: Technical Math
Created: June 11, 2020
Updated: June 11, 2020
Total Credits: 4
Lecture Hours: 40
Lecture / Lab Hours: 0
Lab Hours: 0
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: No
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
MTH 65 (https://www.cgcc.edu/courses/mth-65) or equivalent placement test scores

Recommended
Concurrent enrollment in EET 111 (https://www.cgcc.edu/courses/eet-111)

Course Description

Explores mathematics used in the study of technical and industrial systems including basic algebra, engineering notation, unit conversion and dimensional analysis, function notation, exponential and logarithmic functions, sinusoidal functions, and complex numbers in polar, rectangular, and phasor forms. Scientific calculator required. Recommended: concurrent enrollment in EET 111. Prerequisite: MTH 65 or equivalent placement test scores. Audit available.

Intended Outcomes

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

1. Accurately compute and manipulate quantities relevant to technical and industrial systems.
2. Algebraically solve mathematical equations and formulas for quantities and variables of interest.
3. Demonstrate understanding of mathematical functions arising in technical and industrial systems.
4. Demonstrate understanding of complex numbers and their application to technical and industrial systems.
5. Analyze and effectively communicate mathematical results.

Outcome Assessment Strategies

Assessment shall include some combination of the following:

- Class participation
- Group and individual projects
- Presentations
- Portfolios
- Research papers
- Homework assignments
- Written papers
- Quizzes
- Exams
- Other assessments of the instructor’s choosing

Texts and Materials

- Blitzer, R. (2004). Intermediate Algebra for College Students 5th Edition, Pearson Prentice Hall.

- Gardner, D. (2014). Applied Algebra I, 3rd Edition. OER. Retrievable from: https://go.roguecc.edu/sites/go.roguecc.edu/files/users/DGardner/pdf/MTH%2063%20Book%203rd%20Edition%20CC%20License.pdf
  - CC License: https://creativecommons.org/licenses/by-nc-sa/4.0/
- Gardner, D. (2016). Applied Algebra 2, 2rd Edition. OER. Retrievable from: https://go.roguecc.edu/sites/go.roguecc.edu/files/users/DGardner/pdf/MTH%2096%20Book%202nd%20Edition%20CC%20License.pdf
  - CC License: https://creativecommons.org/licenses/by-nc-sa/4.0/
- Lane ORCCA (2019-2020): Open Resources for Community College Algebra. Retrievable from: https://math.oer.lanecc.edu/orcca/orcca.html
- Lippman, D. and Rasmussen, M. (2015). Precalculus: An Investigation of Functions, Edition 2.0. OER. Retrievable from: http://www.opentextbookstore.com/precalc/

Course Activities and Design

he determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Course Content (Themes, Concepts, Issues and Skills)

Outcome 1: Accurately compute and manipulate quantities relevant to technical and industrial systems.
To address this outcome, the following shall be taught:

1. Units, notation, and dimensional analysis
   - SI and US customary units
   - Significant figures
   - Decimal system
   - Engineering notation
   - Dimensional analysis and unit conversion
   - Measurement theory and measurement error
2. Geometry and arithmetic of the real numbers

Outcome 2: Algebraically solve mathematical equations and formulas for quantities and variables of interest.
To address this outcome, the following shall be taught:

1. Basic algebra
   - Mathematical expressions and equations
   - Equivalent expressions
   - Solving algebraic equations
   - Solving algebraic formulas for a variable
   - Graphing algebraic equations
2. Applications of basic algebra
   - Ohm’s law and Kirchhoff’s current and voltage laws
   - Linearity, superposition and other network theorems
3. Microsoft Excel
   - Graphical display of algebraic equations

Outcome 3: Demonstrate understanding of mathematical functions arising in technical and industrial systems.
To address this outcome, the following shall be taught:

1. Exponential and logarithmic functions
   - Function notation
   - Exponential function: definition, evaluation, and graphical representation
   - Logarithmic function: definition, evaluation, and graphical representation
   - Relationship between exponential and logarithmic functions
   - Applications to technical and industrial systems
2. Sinusoids
   - Periodic motion, sinusoidal waves
   - Sine function: definition, evaluation, and graphical representation
   - Unit circle approach to sine function
   - Frequency spectrum
   - Phase relationships, average values, rms values
   - Applications to technical and industrial systems

3. Microsoft Excel
    - Data analysis
    - Graphical display of data and functions

Outcome 4: Demonstrate understanding of complex numbers and their application to technical and industrial systems.
To address this outcome, the following shall be taught:

1. Complex numbers
    - Rectangular form
    - Polar form
    - Arithmetic of complex numbers
    - Complex plane and geometry of complex arithmetic
    - Phasors (phase vectors)
    - Applications to technical and industrial systems

Outcome 5: Analyze and effectively communicate mathematical results.
To address this outcome, the following shall be taught:

1. Previous content with emphasis on
    - Critical analyses of mathematical methods and results
    - Correct mathematical notation
    - Appropriate forms and notation for communication in technical and industrial systems

Department Notes

Word problems are to be answered using complete sentences and include appropriate units.

Related Instruction – Approved Standalone Options

Communication

- BA 205 Business Communication (4 cr)
- COMM 111 Public Speaking (4 cr)
- COMM 140 Introduction to Intercultural Communication (4 cr)
- COMM 214 Interpersonal Communication: Process and Theory (4 cr)
- COMM 215 Small Group Communication: Process and Theory (4 cr)
- WR 115 Introduction to Expository Writing (4 cr)
- WR 121 English Composition (4 cr)
- WR 122 English Composition (4 cr)
- WR 227 Technical and Professional Writing (4 cr)

Computation

- BA 104 Applied Business Math (4 cr)
- MTH 105 Math in Society (4 cr)
- MTH 111 College Algebra (5 cr)
- MTH 112 Elementary Functions (5 cr)
- MTH 243 Statistics I (5 cr)
- MTH 244 Statistics II (5 cr)
- MTH 251 Calculus I (5 cr)
- MTH 252 Calculus II (5 cr)
- MTH 253 Calculus III (5 cr)

Human Relations

- BA 285 Human Relations in Organizations (3 cr)
- PSY 101 Psychology and Human Relations (4 cr)