ORIGINAL COURSE IMPLEMENTATION DATE: September 2017

REVISED COURSE IMPLEMENTATION DATE:

COURSE TO BE REVIEWED: (six years after UEC approval) April 2023

Course outline form version: 09/15/14

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

Course Code and Number: AMRT 402	**Number of Credits:** 6 Course credit policy (105)
Course Full Title: Aircraft Systems **Course Short Title (if title exceeds 30 characters):** Aircraft Systems	
Faculty: Faculty of Applied and Technical Studies	**Department (or program if no department):**

Calendar Description:

Students will learn about the function, purpose, components, and troubleshooting of hydraulic, pneumatic, fuel, ice and rain protection, fire protection, environmental control, and emergency equipment systems.

Prerequisites (or NONE):	Admission to the Aircraft Maintenance Engineer M-Licence certificate program.
Corequisites (if applicable, or NONE):	NONE
Pre/corequisites (if applicable, or NONE):	NONE

Equivalent Courses (cannot be taken for additional credit)

Former course code/number:

Cross-listed with:

Equivalent course(s):

Note: Equivalent course(s) should be included in the calendar description by way of a note that students with credit for the equivalent course(s) cannot take this course for further credit.

Transfer Credit

Transfer credit already exists: ☐ Yes ☒ No

Transfer credit requested (OReg to submit to BCCAT):
☐ Yes ☒ No (if yes, fill in transfer credit form)

Resubmit revised outline for articulation: ☐ Yes ☒ No

To find out how this course transfers, see **bctransferguide.ca**.

Total Hours: 90

Typical structure of instructional hours:

Lecture hours	
Seminars/tutorials/workshops	30
Laboratory hours	60
Field experience hours	
Experiential (practicum, internship, etc.)	
Online learning activities	0
Other contact hours:	
Total	**90**

Special Topics

Will the course be offered with different topics?
☐ Yes ☒ No

If yes, different lettered courses may be taken for credit:
☒ No ☐ Yes, repeat(s) ☐ Yes, no limit

Note: The specific topic will be recorded when offered.

Maximum enrolment (for information only):

Expected frequency of course offerings (every semester, annually, every other year, etc.):

Department / Program Head or Director: Rolf Arnold	**Date approved:**	March 2017
Faculty Council approval	**Date approved:**	March 2017
Campus-Wide Consultation (CWC)	**Date of posting:**	April 13, 2017
Dean/Associate VP: John English	**Date approved:**	March 2017
Undergraduate Education Committee (UEC) approval	**Date of meeting:**	April 21, 2017

Learning Outcomes

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

- Describe aircraft operating systems, including ice and rain protection, fire protection, environmental control, and emergency equipment
- Troubleshoot aircraft system faults using troubleshooting aids
- Perform maintenance tasks in aircraft systems

Prior Learning Assessment and Recognition (PLAR)

☐ Yes ☒ No, PLAR cannot be awarded for this course because Transport Canada Approval restricts PLAR

Typical Instructional Methods (guest lecturers, presentations, online instruction, field trips, etc.; may vary at department's discretion)

Presentations, online lessons, practical lab, and workshop exercises.

Grading system: Letter Grades: ☐ Credit/No Credit: ☒ Labs to be scheduled independent of lecture hours: Yes ☐ No ☒

NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.

Typical Text(s) and Resource Materials (if more space is required, download Supplemental Texts and Resource Materials form)

	Author (surname, initials)	Title (article, book, journal, etc.)	Current ed.	Publisher	Year
1.	Jeppesen	A&P Technician – General Textbook & Workbook	☒	Jeppesen	2011
2.	Jeppesen	A&P Technician – Airframe Textbook & Workbook	☒	Jeppesen	2011
3.	AC43.13-1B/2B	Federal Aviation Administration	☒	US DOT	2008
4.	Jeppesen	A&P Technician – Helicopters Textbook	☒	Jeppesen	2011
5.	Jeppesen	A&P Technician – Powerplant Textbook & Workbook	☒	Jeppesen	2011

Required Additional Supplies and Materials (software, hardware, tools, specialized clothing, etc.)

- Basic toolbox
- Coveralls
- Personal safety equipment (PPE)

Typical Evaluation Methods and Weighting

Quizzes/tests:	50%	Shop work:	50%		Total: 100%

Details (if necessary):

The tests and shop work cannot be averaged – both sections must achieve a 70% grade to meet the minimum Transport Canada requirements.

Typical Course Content and Topics:

COURSE COMPONENTS:

A1 Describe fuel systems
A2 Describe Ice and Rain protection systems
A3 Describe Fire Protection system
A4 Describe Environmental Control systems
A5 Describe Emergency Systems and equipment
A6 Troubleshoot aircraft system faults
A7 Perform maintenance tasks in aircraft systems

LEARNING STEPS:

- Attend lectures and complete online lessons
- Perform worksheets and projects as described
- Perform projects to an acceptable level (pass/fail)
- Complete theory exams with a minimum grade of 70%

PRACTICAL EXERCISES:

Practical assessments must indicate a "pass" to provide proof of competency:

- AMRT 402-P1 (Fuel System Servicing)
- AMRT 402-P2 (Ice and Rain Protection-Inspect and Test)
- AMRT 402-P3 (Fire Detection System-Inspect and Test)
- AMRT 402-P4 (ECS-Inspect and Test)
- AMRT 402-P5 (System Troubleshooting)

THEORY EXAMINATION(S):

Formative exams and quizzes throughout the course:

- AMRT 402-T1 (Aircraft Systems-1)
- AMRT 402-T2 (Aircraft Systems-2)