

AIRCRAFT MAINTENANCE TECHNOLOGY (280.C0)

DIPLOMA OF CEGEP STUDIES (DCS)

To receive a Diploma of Cegep Studies, you must meet the following three conditions:

1. You must **pass** all the courses in your program. Courses appear inside the program grid.
2. You must **pass** the Ministerial Examination of Cegep English. This ministerial examination immediately follows the third of four English courses. The result of this examination is used for the certification of studies and, should such be the case, for the admission to university. The requirement of passing this examination is the same for students in the technology sector.
3. You must **pass** the Comprehensive Assessment in your program. In each of the programs, one course (or sometimes more) is an assessment course and is identified. The Institutional Policy on the Evaluation of Student Achievement (IPESA) states that “the admission to the program’s comprehensive assessment requires that students be registered in the final courses of their programs during that semester, with the exception of complementary general education courses (Article 5.4.3).”

FULL TIME STATUS AND TUITION-FREE STUDIES

Full time status and tuition-free studies can only be obtained by registering for courses deemed necessary for receiving a DSC (Diploma of Cegep Studies) in the program in which a student is registered. A course is deemed necessary in a DSC program only if the absence of this course prevents students from receiving a DSC in the program in which they are studying. **Registering for an unnecessary course is not authorized in this context.**

IMPORTANT

You must keep this document throughout the duration of your Cegep studies. It is also available on the Cegep website at the following address: <http://guideena.cegepmontpetit.ca/cahiers-de-programmes/>

	SESSION 1	SESSION 2	SESSION 3	SESSION 4	SESSION 5	SESSION 6												
Formation générale																		
26 2/3 unités	Physical Education 109-101-MQ 1 1 1			Physical Education 109-102-MQ 0 2 1		Physical Education 109-103-MQ 1 1 1 PA 109-101 et 102												
		Humanities 345-101-MQ 3 1 3	Humanities 345-102-MQ 3 0 3 PA 345-101-MQ	Humanities 345-CEG-EM 3 0 3 PA 345-102-MQ														
	English 603-101-MQ 2 2 4	English 603-102-MQ 2 2 3 PA 603-101-MQ	English 603-103-MQ 2 2 3 PA 603-102-MQ			English 603-CEG-EM 3 1 2 PA 603-103-MQ												
			French 602-xxx-MQ 2 1 3	French 602-yyy-EM 2 1 3 PA 602-xxx-MQ														
					Complementary Course COMPL 3 0 3	Complementary Course COMPL 3 0 3												
Formation spécifique																		
65 unités	Applied Mathematics 201-1A5-EM 3 2 3 025S	Aircraft Applied Mathematics 201-2A5-EM 3 2 3 025S PA 201-1A5-EM	Piston Engine Maintenance 280-3A4-EM 1 3 1 025Y PA 280-1C5-EM	Turbo Machine Maintenance 280-4A5-EM 1 4 1 026A PA 280-2D5-EM	Propeller Maintenance 280-5A3-EM 1 2 1 0264	Avionics Maintenance 280-6A3-EM 0 3 1 025T - 0263 PA 280-3D4-EM												
	Assembly and Installation 280-1A5-EM 2 3 1 025Q	Organic Materials Used in Aeronautics 280-2A5-EM 3 2 2 025R	Aerodynamics 280-3B4-EM 2 2 2 0260	Alternate Current Avionics 280-4A4-EM 2 2 2 025T - 0263	Control Surfaces 280-5A5-EM 2 3 1 0267	Composite Structural Repair 280-6A6-EM 2 4 1 0261 - 0262												
	Aircraft Blueprint Reading 280-1A3-EM 1 2 2 025P	Minor Repairs 280-2B5-EM 2 3 2 025X - 025Z CR 280-2A5-EM CR 280-2C5-EM	Civil Aviation 280-3C4-EM 2 2 2 025N - 026D	Hydraulics and Pneumatics 280-4B5-EM 2 3 2 025U	Aircraft System Operation 280-5A4-EM 2 2 2 0269 - 026C	Internship on Planes 2 ¹ 280-6A4-EM 0 4 1 026E PA 280-5B3-EM CR 280-6B4-EM												
	Aircraft Piston Engines 280-1C5-EM 3 2 2 025V	Strength of Materials 280-2C5-EM 3 2 2 025W	Direct Current Avionics 280-3D4-EM 2 2 2 025T - 0263	Helicopters 280-4B4-EM 2 2 2 0268	Engine Performance 280-5A6-EM 3 3 2 026B PA 280-1C5-EM PA 280-2D5-EM	Internship on Helicopters 2 ¹ 280-6B4-EM 0 4 1 026F PA 280-5C3-EM CR 280-6A4-EM												
	Introduction to Aeronautics 280-1B5-EM 3 2 2 025N - 0260 - 0268	Turbo Machine Operation 280-2D5-EM 3 2 2 0266	Metal Structural Repair 280-3A6-EM 2 4 1 025Z - 0261	Aircraft Instrumentation 280-4C5-EM 3 2 2 0263 - 0265	Internship on Planes 1 280-5B3-EM 0 3 1 026D	Aircraft System Maintenance 280-6C4-EM 0 4 1 0269 - 026C PA 280-5A4-EM												
					Internship on Helicopters 1 280-5C3-EM 0 3 1 026D Radio Systems 280-5B4-EM 2 2 2 0265													
Pondération																		
T - P - E	15	14	15	19	14	17	16	16	17	15	16	16	13	18	13	9	21	11
Heures/semaine	44			50			49			47			44			41		
Cours/session	7			7			8			8			7			8		

1. This course is a review of all subject matter seen during the 3 year program. Please note that in order to register to this course you will have had to complete successfully the prerequisites courses identified.

YOUR ACADEMIC PROFILE

1. Courses Offered

All the courses are offered once a year; that is, courses in the 1st, 3rd and 5th semesters are offered only in the fall, and courses in the 2nd, 4th and 6th semesters are offered only in the winter. A failure in one of your core courses could result in prolonging your academic program for a year.

2. Registration

It is your responsibility to register for your courses each semester by confirming the course selection and paying the necessary fees by the stated deadline. In order to do this, you must confirm your registration by using the module " *Choix de cours* " with the Cegep's online management system *Omnivox*. Registration for Fall courses is done the preceding March and for Winter courses, the preceding October.

It is essential that you read the registration documents carefully, follow the guidelines correctly and choose the courses that are part of your program.

If you wish to modify the courses proposed for the following semester, you must schedule an appointment with your Academic Advisor as early as possible.

3. Sequence of Courses

You must follow the prescribed sequence of courses for both your general education and core courses. Otherwise, we will have to delay the progression of your core courses so that you can catch up with your general education courses.

Students who do not follow the standard sequence of courses for their program cannot be guaranteed to have a schedule that accommodates the original course selections.

4. Meeting your Academic Advisor

We recommend that you make an appointment to meet with your Academic Advisor for any questions related to your academic profile. To do so, please use the module " *Centre de rendez-vous* " of our online management system *Omnivox*. If no availability is posted and you wish to meet with your advisor, go in person to room C-170 at l'École nationale d'aérotechnique (ÉNA).

5. Dropping a course

To officially drop a course without receiving a failing grade on your transcript, you must make an appointment with your Academic Advisor before the course drop deadline. The course drop deadlines for each session are determined by the Minister of Education and they are published in the Academic Calendar.

The above conditions apply even if you have declared to be no longer attending one or more courses on the Declaration of School Attendance on *Omnivox*, because doing so is not the same as officially dropping the course. It is necessary to follow the procedure described in paragraph one in order to avoid receiving a failing grade on your transcript.

6. Incomplete

An " incomplete " note can be given in lieu of a grade if a student shows that he was not able to devote sufficient time to a course for serious reasons. *Serious reasons* would include, for example, an accident, an extended illness. A situation is considered serious if it is beyond the control of the student and causes the student to be absent **for three weeks or more**.

To request an incomplete, you must contact your Academic Advisor **during the session for which you are making the request**, and provide supporting documents. If it involves an illness, the student must fill out the form entitled " *Demande d'incomplet* " by a health professional and give it to the advisor. The form is available in School Organization Department in Room C-170.

Granting an incomplete is done only in exceptional cases and on a case by case basis.

7. Schedule Modification

The *Schedule Modification* module (Modification d'horaire) may permit you to displace certain courses on your timetable for a fee of \$ 30. These costs will be charged to your account. If the module does not offer any possible timetable changes, it is most likely because the current courses are full. Also, please note that your Academic Advisor will decline all request for displacing courses in your timetable.

8. Attendance validation

Each semester, you must confirm your attendance in each of your courses using the module " *Fréquentation scolaire* " on the Cegep's online management service, *Omnivox*. Following your confirmation, your status as a full or part-time student may change. If your status changes, you will receive an invoice for the appropriate academic fees. Regardless of your status, all courses from which you did not withdraw before the deadline will appear on your record with the corresponding grade and the points you accumulated during the semester.

9. Sources of Information

We recommend that you regularly consult the following sources of information: the Cegep website (<http://ena.cegepmontpetit.ca>), *Omnivox* (the Cegep's online management system), the Student Guide, the Semester Guide, the remote display and the student agenda.

10. Mandatory competency card

In order to obtain these competency cards, some non-credited courses will be offered outside the normal school schedule (i.e. from December to January, weekends, etc.) to obtain skills like :

- Scissor lift and aerial platform training ;
- Overhead Crane training (in the second semester, in the course 280-2D5-EM) ;
- Radio Licence.

We suggest you enroll in your first year as these cards will be required for training during the 5th and 6th semester. A Fee may be charged.

A PROGRAM COMPREHENSIVE ASSESSMENT (PCA)

1. Why is there a Comprehensive Assessment for each program?

The *Cegep Studies System* assigns a comprehensive assessment to each program leading to a Diploma of Cegep Studies (DSC). The Comprehensive Assessment assesses whether students have reached all of the objectives and standards set forth in the study program.

2. What is the goal of the program's Comprehensive Assessment ?

The *Cegep's Institutional Policy on the Evaluation of Student Achievement* (IPESA) states that:

“ The Comprehensive Assessment requires graduating students to demonstrate that integration of acquired competencies of a given program of studies has taken place in both work and study situations. It allows the Cegep to verify that the overall program outcomes, as defined by means of the Exit Profile, have been achieved by students, in both general and specific education contexts (Article 6.4.2).”

3. Who must complete a program's Comprehensive Assessment?

All students enrolled in educational systems in effect since 1994 and who are completing their DSC programs must complete a comprehensive assessment, regardless of the date they started their studies in the program. The assessment will be given in the student's last semester.

4. Must students pass the program's Comprehensive Assessment in order to receive a DSC (Diploma of Cegep Studies)?

Yes. Passing the comprehensive assessment has been a necessary condition for receiving a DSC since the Winter 1999 semester, (*Cegep Studies System, Article 32*).

5. Are the Program's Comprehensive Assessments the same in each Cegep?

No. The ways and means for completing a comprehensive assessment designed for each program are defined by each Cegep. The comprehensive assessment will therefore differ from one Cegep to another.

6. Who can be admitted to the Program's Comprehensive Assessment?

To be admitted to the program's comprehensive assessment, students must be registered in their program's final courses, with the exception of complementary general education courses.

7. Who develops the Program's Comprehensive Assessment?

The assessment's description of activities, components and evaluation plan will be developed by the discipline(s) of a comprehensive assessment course(s).

8. What is a Program's Comprehensive Assessment course(s)?

The Comprehensive Assessment is part of a course(s) that is taken in the program's final semester by students. This course(s) is considered as the assessment course (s). Students must therefore be registered in the comprehensive assessment course(s) in their final semester.

9. Is it possible to fail the Assessment and pass the Assessment course(s)?

No.

10. Is it possible to pass the Assessment and fail the Assessment course(s)?

No.

The Program's Comprehensive Assessment consists of a measuring instrument that assesses whether acquired competencies have been integrated in the Aircraft Maintenance Technology Program (280.C0). These competencies are listed in the *Graduate Profile*.

1. GRADUATE PROFILE IN AIRCRAFT MAINTENANCE TECHNOLOGY

Competency 1	To master scientific and work role fundamentals
Competency 2	To master work and aeronautical maintenance techniques
Competency 3	To maintain aircraft structures
Competency 4	To complete maintenance of aircraft systems
Competency 5	To perform maintenance of propellers
Competency 6	To perform aircraft maintenance

2. THE CONTRIBUTION OF GENERAL EDUCATION TO THE PROGRAM OF STUDY

General education is an integral part of each program of study and, from a perspective of program approach, is built on the core courses while promoting the development of skills necessary to all curricula. In this way, it contributes to the development of skills that define the portrait of graduates of each program of study through the complementary general education courses and, in particular, these four disciplines:

- English, mother tongue and literature
- Humanities
- French, second language
- Physical Education

By the end of the Cegep program, the general education courses will have guided graduates to appreciate literary works, texts and other artistic productions derived from different historical periods and schools of thought. They will have mastered the French language, allowing them to communicate effectively orally as well as in writing. They will have learned to analyze philosophical works or texts derived from past and present ideas. They will know how to demonstrate a rational, critical and ethical opinion. They will have mastered the basic rules of discourse and argumentation. They will have gained a better understanding of the English language and improved their ability to communicate orally and in writing. They will have learned to adopt a healthy and active lifestyle and recognized the influence of lifestyle on the practice of sport and physical activity. Through general education courses, students will be able to demonstrate independence and creativity in their thoughts and actions. They will have developed strategies that promote the ability to reflect on their own thoughts and actions. Finally, through the complementary general education courses, students will have acquired an openness to fields of human activity other than their own area of specialization.

3. OBJECTIVES OF SPECIFIC EDUCATION

The program aims at preparing students to apply the principles, techniques and methods specific to the field and those that characterize work organizations. The program also aims at preparing future technicians in the necessary technological mastery of various activities in airplanes and helicopters, which also contributes to job mobility. The program aims at developing six major competencies.

To master scientific and work role fundamentals

025N*	To analyze the occupation
025S	To model and interpret mathematical results as they apply to aircraft maintenance
025W	To perform activities related to the resistance of materials used in the aircraft industry
0260	To apply principles of aerodynamics
0268	To apply principles of aerodynamics to flight and helicopter maintenance

To master work techniques in maintenance aircraft

- 025N* To analyze the occupation
- 025P To interpret schematics, drawings, assembly plans and installation plans
- 025Q To apply shaping, assembly and installation techniques
- 025R To use organic and synthetic materials
- 025T To maintain direct-current circuits on an aircraft
- 0263* To verify simple alternating-current circuits on an aircraft
- 026D To inspect airplanes and helicopters

To complete maintenance of aircraft structures

- 025X To clean, inspect and protect aircraft materials
- 025Z To prepare and assemble sheet metal
- 0261 To maintain the metal structures and structural components of an aircraft
- 0262 To maintain aircraft structures and structural components made of composite materials, wood and fabric

To complete maintenance of aircraft systems

- 025U To inspect the operation of power and control components of hydraulic and pneumatic systems
- 0263* To verify simple alternating-current circuits on an aircraft
- 0265 To verify communications, navigation and instrumentation systems
- 0267 To maintain flight controls and flight control surfaces
- 0269 To maintain landing gear
- 026C To maintain aircraft systems

To perform maintenance of propellers

- 025V To inspect the operation of aircraft piston engines
- 025Y To overhaul aircraft piston engines
- 0264 To maintain propellers and propeller-related systems
- 0266 To verify the operation of aircraft turbine engines
- 026A To overhaul aircraft turbine engines
- 026B To assess the performance of piston and turbine engines

To perform aircraft maintenance

- 026E To maintain airplanes
- 026F To maintain helicopters

* Part of ministerial objective

4. PROGRAM'S COMPREHENSIVE ASSESSMENT COURSES

In *Aircraft Maintenance Technology*, passing the program's comprehensive assessment is conditional to passing the following two courses: *Aircraft maintenance training session (280-624-EM)* and *Helicopter maintenance training session (280-634-EM)*.

5. CONTEXT FOR COMPLETING THE COMPREHENSIVE ASSESSMENT

5.1 Comprehensive Assessment objective of the Aircraft Maintenance Technology Program

To demonstrate the ability to perform aircraft maintenance (airplanes and helicopters) and their components (motors, mechanical systems, electrical systems and hydraulic systems).

- To find relevant information regarding different maintenance activities and organize these operations in accordance with aeronautical standards.
- To verify functional parameters
- To evaluate a component to determine its aeronautical condition.
- To correct anomalies
- To inspect and to commission according to manufacturer' recommended schedules
- To tow and handle grounded aircraft.
- To record inspections and interventions in aircraft technical documentation.

6. COMPREHENSIVE ASSESSMENT EVALUATION PLAN

The comprehensive assessment's performance standard is set at 60%. It is the cumulative score of both the practical and theoretical sections. Passing the *Airplane Maintenance training session* and the *Helicopter Maintenance training session* courses automatically means passing the Comprehensive Assessment.

ÉVALUATION GRID
AIRPLANE MAINTENANCE TRAINING SESSION AND HELICOPTER MAINTENANCE TRAINING SESSION

Competency	Deliverables	Indicator	Criteria	Weighting
1. 026E, 026F Perform activities related to the maintenance of airplanes and helicopters.	<ul style="list-style-type: none"> To find relevant information for different maintenance activities 	<ul style="list-style-type: none"> To be indicated during assessment 	<ul style="list-style-type: none"> Accuracy of information In a prescribed time 	10 % to 20 %
	<ul style="list-style-type: none"> To verify and evaluate functional parameters of different systems such as lighting, hydraulic, de-icing, etc. 	<ul style="list-style-type: none"> To be indicated during assessment 	<ul style="list-style-type: none"> To find information To interpret information To verify To follow applicable safety rules To transmit results 	50 % to 70 %
	<ul style="list-style-type: none"> To correct anomalies 	<ul style="list-style-type: none"> To be indicated during assessment 	<ul style="list-style-type: none"> To find information To interpret information To follow safety rules Choice and use of tools Confirmation of results 	10 % to 20 %
	<ul style="list-style-type: none"> To register technical problems and adjustments in aircraft maintenance log book. 	<ul style="list-style-type: none"> To be indicated during assessment 	<ul style="list-style-type: none"> To describe and log observations To use proper technical terms 	10 % à 15 %
Total				100 %
Performance standard				60 %