

## COURSE OUTLINE

**COURSE:**                 **Structure of Civil Aviation**

**PROGRAM:**             280.C0 Aircraft Maintenance Technology

**DISCIPLINE:**         280 Aeronautics

**WEIGHTING:**         Theory: 2                                 Practical Work: 2                                 Personal Study: 2

Instructor(s)	Office	☎ extension	✉ e-mail or website
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### OFFICE HOURS

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Morning					
Afternoon					

Coordinator(s)	Office	☎ extension	✉ e-mail or website
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## **CONTEXT OF THIS COURSE IN THE PROGRAM**

This course is offered during the third session of the program for students in the Aircraft Maintenance Program 280.CO.

By the end of the course, students will be able to:

- Recognize the maintenance requirements to ensure the airworthiness of an aircraft.
- Recognize the responsibilities and limits of an AME (Aircraft Maintenance Engineer)
- Identify aircraft inspection and maintenance standards
- Explain inspection programs and maintenance schedules
- Monitor and accurately record the various maintenance activities
- Recognize the rules of professional ethics
- Recognize the terminology related to the regulation of civil aviation

**Students must keep this course outline for the duration of their studies as it will be useful for the comprehensive assessment at the end of the program.**

### **Transport Canada**

This course outline meets the requirements of Training Organisation Certification Manual (MCF) of Transport Canada.

The Department applies Transport Canada standard which allows a maximum absence of 5% for the course (theory and laboratory). The department compiles absences of all students enrolled in Aircraft Maintenance (280.C0) and Avionics (280.D0) according to Transport Canada requirements. The application of Transport Canada policies regarding absences is available on the college website and in the student agenda under the heading « Privilèges accordés par Transports Canada ».

## **MINISTERIAL OBJECTIVE(S) AND COMPETENCIES**

- 025N** To analyze the occupation (of Aircraft Maintenance Technology)  
**026D** To carry out activities related to inspecting airplanes and helicopters.

## **TEACHING AND LEARNING STRATEGIES**

In this course, the theoretical and practical parts of the course are integrated. The course is given in an internet-networked classroom and each student works at a computer.

Students will complete their learning with personal notes and homework.

Support materials include:

- Maintenance planning software: Aircraft Maintenance Manager.
- The websites of Transport Canada (TC), Federal Aviation Administration (FAA), European Aviation Safety Agency (EASA) and the International Civil Aviation Organization (ICAO).
- Technical documentation of aircraft manufacturers.

**COURSE PLAN**

**Activity Periods: Weeks 1 to 5 Length of Time: 20 hours**

Learning Objective	Content	Personal Study Activities	# of hours
1.1 Recognize the responsibilities and intervention limits of an AME (Aircraft Maintenance Engineer)	<ul style="list-style-type: none"> <li>▪ Course Outline</li> <li>▪ Personnel Licenses</li> </ul>	<ul style="list-style-type: none"> <li>▪ Reading of Airworthiness Series CO11</li> <li>▪ Guided reading of Part IV and Chapter 566 of Part V of the CAR (regulations and standards of AME licences)</li> </ul>	6
1.2 Recongnize and interpret the provisions on aeronautics legislation and the rules of ethics related to the work of an AME.	<ul style="list-style-type: none"> <li>▪ Approved Maintenance Organizations (AMO)</li> <li>▪ Manufacturers</li> <li>▪ Operators/AMO.</li> <li>▪ Applying laws</li> <li>▪ Code of ethics: to come</li> <li>▪ Civil authorities</li> <li>▪ Canadian organizations</li> <li>▪ Foreign organizations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Quebec Aerospace Association (www.aqa.ca)</li> <li>▪ Consultation du répertoire des entreprises aéronautiques de l'ÉNA.</li> <li>▪ Guided reading of the Aeronautics Act</li> <li>▪ Guided reading of the Canadian Aviation Regulations</li> <li>▪ Guided reading of the Transportation Appeal Tribunal of Canada (TATC)</li> <li>▪ Guided reading of the Chicago Convention</li> <li>▪ Guided reading of Appendices 6 and 8 of the Chicago Convention .</li> </ul>	10
1.3 Recognize the norms of civil aviation	<ul style="list-style-type: none"> <li>▪ Type Certificate</li> <li>▪ Supplemental Type Certificat</li> <li>▪ Certificate of Registration</li> <li>▪ Flight Authorities</li> <li>▪ ATA 100.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Guided reading of CAR, part 2 and 5</li> </ul>	6
<b>EXAM # 1</b>			2

**Activity Periods: Weeks 6 to 10 Length of time: 20 hours**

Learning Objective	Content	Personal Study Activities	# of hours
2.1 Recognize the requirements of an aircraft inspection program.	<ul style="list-style-type: none"> <li>▪ Maintenance schedules</li> <li>▪ Unscheduled tasks</li> <li>▪ TC requirements, manufacturers and operators</li> <li>▪ Introduction to maintenance planning software.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Guided reading of Standard 625.</li> <li>▪ Familiarisation with maintenance planning software</li> </ul>	8
2.2 Precisely identify Transport Canada inspection and maintenance standards for an aircraft.	<ul style="list-style-type: none"> <li>▪ Research on Transport Canada requirements for different types of aircraft and operations</li> <li>▪ Airworthiness</li> <li>▪ Service Difficulty Reports</li> <li>▪ Annual Airworthiness Information Report</li> </ul>	<ul style="list-style-type: none"> <li>▪ Guided reading of Parts V, 6 and 7.</li> <li>▪ Transport Canada Publications</li> </ul>	4
2.3 Precisely identify the manufacturer's specifications for the inspection of an aeronautical product	<ul style="list-style-type: none"> <li>▪ Research manufacturer's requirements</li> </ul>	<ul style="list-style-type: none"> <li>▪ Consultation of various maintenance manuals</li> </ul>	6
<b>EXAM # 2</b>			2

**Activity Periods: Weeks 11 to 15 Length of time: 20 hours**

<b>Learning Objective</b>	<b>Content</b>	<b>Personal Study Activities</b>	<b># of hours</b>
3.1 Properly record various maintenance activities. Check and correct as necessary the maintenance record of an aircraft.	<ul style="list-style-type: none"> <li>▪ After doing the maintenance work, update the maintenance record of an aircraft.</li> <li>▪ Maintenance release</li> <li>▪ Minimum equipment list; list of configuration differences</li> <li>▪ Conditional certification</li> <li>▪ Maintenance record</li> <li>▪ Deferred maintenance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Use of maintenance software</li> <li>▪ Guided reading of CAR</li> <li>▪ Elementary work</li> <li>▪ Standard 571.10 Type of work table</li> <li>▪ Servicing</li> <li>▪ Specialized maintenance</li> </ul>	8
3.2 Recognize the requirements and the scope of a declaration of airworthiness.	<ul style="list-style-type: none"> <li>▪ Transport Canada Publications</li> <li>▪ Maintenance record</li> <li>▪ Advisory documents</li> </ul>	<ul style="list-style-type: none"> <li>▪ Reading</li> </ul>	6
<b>EXAM # 3</b>			2

**SYNTHESIS OF SUMMATIVE EVALUATION METHODS**

Description of Evaluation Activity	Context	Learning Objective(s)	Due Date (approximate date assignment due or exam given)	Weighting (%)
<ul style="list-style-type: none"> <li>▪ Written exam, long answers and/or multiple choice.</li> </ul>	<ul style="list-style-type: none"> <li>▪ In class, individual</li> </ul>	Part 1 of the course outline	Week 5.	30%
<ul style="list-style-type: none"> <li>▪ Written exam, long answers and/or multiple choice.</li> </ul>	<ul style="list-style-type: none"> <li>▪ In class, individual</li> </ul>	Part 2 of the course outline	Week 10.	30%
<ul style="list-style-type: none"> <li>▪ Written exam, long answers and/or multiple choice.</li> </ul>	<ul style="list-style-type: none"> <li>▪ In class, individual, using maintenance software, access to the Transport Canada website and aircraft technical documents</li> </ul>	Part 3 of the course outline	Week 15.	40%

**TOTAL : 100%**

## REQUIREMENTS TO PASS THE COURSE

### (1) Passing Mark

The passing mark for this course is 60%.

### (2) Attendance for Summative Evaluations

Students must be present for summative evaluations.

### (3) Submitting Assignments

All assignments must be submitted by the date, hour and location designated by the instructor(s). Late homework assignments will be penalized 10% per day that they are late and will receive a mark of zero (0) after one week.

### (4) Presentation of Written Work

Students must follow the standards adopted by the College for written work (« *Normes de présentation matérielle des travaux écrits* »). These can be found in the documentation centre on the College web site (<http://ww2.college-em.qc.ca/biblio/normes.pdf>) under the heading « **Aides à la recherche** »

## METHODS OF COURSE PARTICIPATION

- Cell phones must be turned off during the course and are prohibited during exams.
- Drinks and food are prohibited in the room.

## REQUIRED MATERIAL

Documents will be sent regularly to all students in electronic form via LEA. It is the responsibility of the students to obtain them.

## MEDIAGRAPHY

Canada, Transport Canada aviation, part 1, 2, 4, 5, 6, 7 of CAR  
Aeronautics Act  
Internet sites

### International

International Civil Aviation Organisation - OACI ..... <http://www.icao.int>  
International Air Transport Association - IATA..... <http://www.iata.org>

### Europe

European Civil Aviation Conference – ECAC / CEAC ..... <http://www.ecac-ceac.org>  
European Aviation Safety Agency /  
Agence européenne de la sécurité aérienne EASA / AESA ..... <http://www.easa.eu.int/home/index.html>

### United States

Federal Aviation Administration - FAA ..... <http://www.faa.gov>

### Canada

Transport Canada Civil Aviation - TCCA ..... <http://www.tc.gc.ca/eng/air-menu.htm>  
Transport Safety Board of Canada - TSB ..... <http://www.tsb.gc.ca>  
Canadian Transportation Agency ..... <http://www.cta-otc.gc.ca>  
Transportation Appeal Tribunal of Canada - TATC ..... <http://www.tatc.gc.ca>  
Nav Canada ..... <http://www.navcanada.ca>  
Quebec Aerospace Association ..... <http://www.aqa.ca>

## **INSTITUTIONAL POLICIES AND REGULATIONS**

All students enrolled at Collège Édouard-Montpetit must become familiar with and comply with the institutional policies and regulations. In particular, these policies address learning evaluations, maintaining admission status, French language policies, maintaining a violence-free and harassment-free environment, and procedures regarding student complaints. The French titles for the policies are: *Politique institutionnelle d'évaluation des apprentissages, les conditions particulières concernant le maintien de l'admission d'un étudiant, la Politique de valorisation de la langue française, la Politique pour un milieu d'études et de travail exempt de harcèlement et de violence, les procédures et règles concernant le traitement des plaintes étudiantes.*

The full text of these policies and regulations is accessible on the College web site at the following address: <http://www.college-em.qc.ca/campus-de-longueuil/le-college/reglements-et-politiques>. If there is a disparity between shortened versions of the text and the full text, the full text will be applied and will be considered the official version for legal purposes.

## **OTHER DEPARTMENTAL REGULATIONS**

Students are invited to consult the website for the specific rules for this course:  
<http://ena.college-em.qc.ca/etudiants-actuels/programmes-d-etudes/departements-d-enseignement#a2>