

## COURSE OUTLINE

**COURSE:** Direct-Current Avionics Systems

**PROGRAM:** 280.C0 Avionics techniques

**DISCIPLINE:** 280 Aeronautics

**WEIGHTING:** Theory : 2                      Practice : 2                      Personal study: 2

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### PERIOD OF AVAILABILITY TO STUDENTS

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Morning					
Afternoon					

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## 1. PLACE OF THE COURSE IN THE STUDENT'S EDUCATION

This course is offered during the third session of the program.

No course is an absolute prerequisite for this course.

This course is not an absolute prerequisite for any other course. However, this course is part of a program approach. Many of the skills developed in this course will be reinvested in subsequent stages of the program, particularly in the course:

- 280-4A4-EM: Alternate Current Avionics

This course outline should be kept by the student throughout their studies as it will be useful at the time of the integration activity.

**Transport Canada:** This course outline meets the Transport Canada requirements as outlined in the Training Control Manual (TCM). The department follows the Transport Canada standard of 5% absences from courses (theory and laboratory). The department compiles absences for students enrolled in the *Aircraft Maintenance Techniques (280.C0)* and *Avionics Techniques (280.D0)* programs according to Transport Canada requirements. The application of Transport Canada's policy on the control of absences is available on the [My Success at ÉNA](#) website under the heading "Privileges granted by Transport Canada".

In the event of a conflict between this syllabus and Standard 566 of the Canadian Aviation Regulations or the CFSM, the latter shall prevail.

## 2. COMPETENCY OF THE GRADUATE'S PORTRAIT

Perform maintenance on aircraft systems.

## 3. DEPARTMENTAL OBJECTIVE(S) (CODE AND STATEMENT)

025T	To maintain direct-current circuits on an aircraft.
0263	To inspect the operation of simple alternating-current circuits on an aircraft

## 4. FINAL COURSE OBJECTIVE

At the end of the course, the student will be able to troubleshoot electrical generation and distribution systems on single piston aircraft

## 5. LEARNING OBJECTIVES

1. Take measurements on DC electrical circuits (series, parallel and mixed).
2. Perform check of passive components on DC electrical circuits.
3. Perform aircraft power supply and distribution system check on DC electrical circuits.
4. Troubleshoot anomalies in aircraft power and distribution systems.

## 6. COURSE PLANNING

### Theoretical part of the course sequence

Course	MODE OF OPERATION			RESOURCES AND TECHNOLOGICAL TOOLS (URL link)
	Objectives	Contents	Learning activities	
1	<p>Take measurements on DC electrical circuits.</p> <p><b>Define the concept of electrical current:</b></p> <ul style="list-style-type: none"> <li>The origin of electricity</li> <li>The flow of current</li> <li>Types of electrical current</li> <li>Electrical conductors</li> <li>Static electricity</li> </ul> <p><b>Define the quantities used in electricity and identify their units of measurement:</b></p> <ul style="list-style-type: none"> <li>Concepts of voltage, current and resistance.</li> </ul>	<p>Presentation of the course outline and sequence</p> <ul style="list-style-type: none"> <li>Structure of atoms and movement of electrons.</li> <li>Natural and conventional sense of electric current.</li> <li>Distinction between continuous and alternating currents.</li> <li>Conductors, insulators and semiconductors.</li> <li>Definition of the Coulomb.</li> <li>Static discharger on aircraft.</li> </ul> <p>Definitions of basic electrical parameters and their units.</p> <ul style="list-style-type: none"> <li>Voltage</li> <li>Current.</li> <li>Resistance.</li> </ul>	<ul style="list-style-type: none"> <li>Team activities</li> <li>Exercices</li> <li>Lectured presentations</li> </ul>	<ul style="list-style-type: none"> <li>PowerPoint (LÉA)</li> <li>Homeworks (LÉA)</li> <li>Video</li> <li>Other applicables ressources</li> </ul>
2	<p><b>Define the link between electrical potential difference, current and resistance:</b></p> <ul style="list-style-type: none"> <li>Ohm law</li> <li>Notions of power and energy.</li> <li>Serial circuits.</li> <li>Parallel circuits.</li> <li>Explanation of an equivalent circuit</li> <li>Mixed circuits</li> <li>Resistance of an electric wire</li> <li>Power Sources (Generators and Batteries)</li> </ul> <p><b>Interpret plans and diagrams with semiconductor elements:</b></p> <ul style="list-style-type: none"> <li>Diode.</li> <li>Zener Diode.</li> </ul>	<p>Composants de contrôle des circuits électriques</p> <ul style="list-style-type: none"> <li>L'interrupteur</li> <li>Le relais</li> <li>Le contacteur</li> </ul> <p>Composants de protection des circuits électriques</p> <ul style="list-style-type: none"> <li>Le fusible</li> <li>Le disjoncteur</li> </ul> <p>Composants de liaison ou de jonction électrique</p> <ul style="list-style-type: none"> <li>Prise.</li> <li>Connecteur.</li> <li>Module de jonction rapide (Terminal Block).</li> <li>Shunt.</li> </ul> <p>Loi d'Ohm</p> <ul style="list-style-type: none"> <li>Relation entre la tension, la résistance et le courant.</li> </ul> <p>Définitions des paramètres électriques et leurs unités</p> <ul style="list-style-type: none"> <li>Puissance.</li> <li>Énergie</li> </ul>	<ul style="list-style-type: none"> <li>Revisions of concepts</li> <li>Lectured presentations</li> <li>Team activities</li> <li>Exercices</li> <li>Homeworks</li> </ul>	
3		<p>Kirchhoff law</p> <ul style="list-style-type: none"> <li>Identification of serial, parallel and mixed circuits.</li> </ul> <p>Application of Ohm and Kirchhoff laws to electrical circuits.</p> <ul style="list-style-type: none"> <li>Determination of total resistance of serial circuits.</li> </ul>	<ul style="list-style-type: none"> <li>Revisions of concepts</li> <li>Lectured presentations</li> <li>Team activities</li> <li>Exercices</li> <li>Homeworks</li> </ul>	

Course	MODE OF OPERATION			RESOURCES AND TECHNOLOGICAL TOOLS (URL link)
	Objectives	Contents	Learning activities	
4		<b>Quiz 1</b> Kirchoff law <ul style="list-style-type: none"> <li>• Identification of serial, parallel and mixed circuits.</li> </ul> Application of Ohm and Kirchoff laws to electrical circuits. <ul style="list-style-type: none"> <li>• Determination of total resistance of serial circuits</li> </ul>	<ul style="list-style-type: none"> <li>• Revisions of concepts</li> <li>• Lectured presentations</li> <li>• Team activities</li> <li>• Exercices</li> <li>• Homeworks</li> </ul>	
5		Kirchoff law <ul style="list-style-type: none"> <li>• Identification of serial, parallel and mixed circuits.</li> </ul> Application of Ohm and Kirchoff laws to electrical circuits. <ul style="list-style-type: none"> <li>• Determination of total resistance of serial circuits.</li> <li>• Electrical power in electrical circuits .</li> </ul>	<ul style="list-style-type: none"> <li>• Revisions of concepts</li> <li>• Lectured presentations</li> <li>• Team activities</li> <li>• Exercices</li> <li>• Homeworks</li> </ul>	
6		Semi-conductors <ul style="list-style-type: none"> <li>• N, P-type materials, PN junctions and polarization of PN junctions.</li> <li>• Recognizing the symbol for diodes.</li> <li>• Functions of diodes                             <ul style="list-style-type: none"> <li>• Switching circuits</li> <li>• Free-wheel circuits</li> <li>• LED</li> <li>• Photodiodes</li> <li>• Zener Diodes</li> </ul> </li> </ul> Types and characteristics of batteries used in aviation. <ul style="list-style-type: none"> <li>• Lead-acid batteries</li> <li>• Nickel-Cadmium batteries</li> <li>• Lithium-ion batteries</li> </ul> Examples of parameters, circuits, components and electrical equipment used on aircraft. <ul style="list-style-type: none"> <li>• Voltages, Currents and Powers in DC circuits</li> <li>• Types of resistors used in a circuit for an aircraft.</li> <li>• <b>Introduction to the Battery Research Project</b></li> </ul>	<ul style="list-style-type: none"> <li>• Revisions of concepts</li> <li>• Lectured presentations</li> <li>• Team activities</li> <li>• Exercices</li> <li>• Research on batteries</li> </ul>	
7	Exam 1 (15 points)	<b>Theoretical evaluation of the concepts acquired in courses 1 to 6.</b>		<b>Review of documents, exercises and assignments</b>

Course	MODE OF OPERATION			RESOURCES AND TECHNOLOGICAL TOOLS (URL link)
	Objectives	Contents	Learning activities	
8	<p>Perform Aircraft DC Power Supply and DC Distribution System Check.</p> <p><b>Check operation of DC generation systems</b></p> <p>Check a DC generation system of a single piston engine.</p> <p>Check a DC generation system of a single turbine engine.</p>	<p>Resistance of a circular conductor wire</p> <ul style="list-style-type: none"> <li>conductor resistance .</li> <li>Types of conductors used in aeronautics and characteristics: AC 43.13-1B et AC 43.13-2A</li> </ul> <p>Choice of a conductor gauge according to the criteria of voltage, current and distance from the source.</p> <ul style="list-style-type: none"> <li><b>Delivery of Battery Research Report</b></li> </ul>	<ul style="list-style-type: none"> <li>Revisions of concepts</li> <li>Lectured presentations</li> <li>Team activities</li> <li>Exercices</li> <li>Homeworks</li> </ul>	<ul style="list-style-type: none"> <li>PowerPoint (LÉA)</li> <li>Homeworks (LÉA)</li> <li>Video</li> <li>Other applicables ressources</li> </ul>
9		<ul style="list-style-type: none"> <li>Electromagnetism</li> <li>Applications of electromagnetisme</li> <li>Electromagnetic induction</li> </ul>	<ul style="list-style-type: none"> <li>Revisions of concepts</li> <li>Lectured presentations</li> <li>Team activities</li> <li>Exercices</li> <li>Homeworks</li> </ul>	
10		<p>DC electrical machines</p> <ul style="list-style-type: none"> <li>DC generator</li> </ul>	<ul style="list-style-type: none"> <li>Revisions of concepts</li> <li>Lectured presentations</li> <li>Team activities</li> <li>Exercices</li> <li>Homeworks</li> </ul>	
11		<p>DC electrical machines (continued)</p> <ul style="list-style-type: none"> <li>DC alternateur</li> <li>Voltage regulator</li> </ul>	<ul style="list-style-type: none"> <li>Revisions of concepts</li> <li>Lectured presentations</li> <li>Team activities</li> <li>Exercices</li> <li>Homeworks</li> </ul>	
12		<p><b>Quiz 2</b></p> <p>DC electrical machines (continued)</p> <ul style="list-style-type: none"> <li>DC electrical motor</li> <li>Starter-Gen</li> </ul>	<ul style="list-style-type: none"> <li>Revisions of concepts</li> <li>Lectured presentations</li> <li>Team activities</li> <li>Exercices</li> <li>Homeworks</li> </ul>	
13		<p>Generation, distribution and starting systems for single piston and turbine engines.</p> <ul style="list-style-type: none"> <li>Analysis (using schematics of a single-engine piston aircraft): <ul style="list-style-type: none"> <li>Electrical power generation and distribution system.</li> <li>Starting system.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Revisions of concepts</li> <li>Lectured presentations</li> <li>Team activities</li> <li>Exercices</li> <li>Homeworks</li> </ul>	
14		<ul style="list-style-type: none"> <li>Analysis (using schematics of a single turbine engine aircraft): <ul style="list-style-type: none"> <li>Electrical power generation and distribution system.</li> <li>Starting system.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Revisions of concepts</li> <li>Lectured presentations</li> <li>Team activities</li> <li>Exercices</li> </ul>	

Course	MODE OF OPERATION			RESOURCES AND TECHNOLOGICAL TOOLS (URL link)
	Objectives	Contents	Learning activities	
15	Exam 2 – Final (40 points)	Theoretical evaluation of the concepts acquired in courses 1 to 14.		Review of documents, exercises and assignments

**Sequence of the practical part of the course**

Course	MODE OF OPERATION			RESOURCES AND TECHNOLOGICAL TOOLS (URL link)
	Objectives	Contents	Learning activities	
1	Take measurements on direct current electrical circuits. <b>Perform DC Verification of Passive Components:</b> <ul style="list-style-type: none"> <li>• Operation of electrical control devices.</li> <li>• Operation of electrical protective devices.</li> </ul>	Presentation of the course outline and sequence <ul style="list-style-type: none"> <li>• Avionics Laboratory Safety Concepts</li> <li>• Recall of power of 10</li> <li>• Resistance Color Code</li> <li>• Resistance measurement</li> </ul>	Lab 1 <ul style="list-style-type: none"> <li>• Lected presentations</li> <li>• Workshop familiarization</li> <li>• Workshop experiments</li> </ul>	<ul style="list-style-type: none"> <li>• PowerPoint 1 (LÉA)</li> <li>• Laboratory documents 1, 2, 3 and 4. (LÉA)</li> <li>• Electrical components</li> <li>• Training board and didactic panels</li> </ul>
2		<ul style="list-style-type: none"> <li>• Principle and use of an analog multimeter</li> <li>• Principle and Use of a Digital Bench Multimeter</li> <li>• Principle and use of a portable digital multimeter</li> <li>• Measurement of resistors, relays and switches</li> <li>• circuit breakers and fuses</li> </ul>	Lab 2 <ul style="list-style-type: none"> <li>• Workshop familiarization</li> <li>• Workshop experiments</li> <li>• Practical team activity</li> </ul>	
3		<ul style="list-style-type: none"> <li>• Construction and measurement of electrical circuits 1</li> </ul>	Lab 3 <ul style="list-style-type: none"> <li>• Workshop experiments</li> <li>• Practical team activity</li> </ul>	
4		<ul style="list-style-type: none"> <li>• Construction and measurement of electrical circuits 2</li> </ul>	Lab 4 <ul style="list-style-type: none"> <li>• Workshop experiments</li> <li>• Practical team activity</li> </ul>	
5		Practical Assessment 1	Analysis and verification of simple electrical components and circuits	
6	Perform Aircraft DC Power Supply and Distribution System Check.  <b>Troubleshoot anomalies in the DC generation and distribution system of a single piston engine and a single turbine engine.</b>	<ul style="list-style-type: none"> <li>• Practical presentation of the operation of the single-engine didactic mockup (FR601-M)</li> <li>• Explanation and demonstration of how to use the ground power unit with the mockup.</li> <li>• Use of mockup as operator</li> <li>• Open Circuit Troubleshooting Procedures:                             <ul style="list-style-type: none"> <li>a) exclusively by using a</li> </ul> </li> </ul>	Lab 6 <ul style="list-style-type: none"> <li>• Lected presentations</li> <li>• Workshop familiarization</li> <li>• Workshop experiments</li> </ul> studied systems : <ul style="list-style-type: none"> <li>- Anticollision</li> <li>- Position light</li> <li>- Landing light</li> <li>- Fuel indication system.</li> </ul>	<ul style="list-style-type: none"> <li>• PowerPoint 2 (LÉA)</li> <li>• Single-engine didactic mockup (FR601-M)</li> <li>• Mockup technical documentation</li> <li>• Troubleshooting form (LÉA)</li> </ul>
7			Lab 7 <ul style="list-style-type: none"> <li>• Team troubleshooting exercises on mock-up</li> </ul>	

Course	MODE OF OPERATION			RESOURCES AND TECHNOLOGICAL TOOLS (URL link)
	Objectives	Contents	Learning activities	
8		voltmeter b) exclusively by using an ohmmeter.	Lab 8 • Team troubleshooting exercises on mock-up	
9			Lab 9 • Team troubleshooting exercises on mock-up	
10	Troubleshooting Exam 1	Individual troubleshooting of an aircraft system		
11	<b>Troubleshoot anomalies in the DC generation and distribution system of a single piston engine and a single turbine engine.</b>	<ul style="list-style-type: none"> <li>Troubleshooting of the single engine mockup (FR601-M) using the voltmeter or ohmmeter in accordance with the 14 V Single Piston Engine Procedures Manual (performing a test procedure)</li> </ul>	Lab 11 • Team troubleshooting exercises on mock-up	
12			Lab 12 • Team troubleshooting exercises on mock-up	
13			Lab 13 • Team troubleshooting exercises on mock-up	
14			Lab 14 • Team troubleshooting exercises on mock-up	
15	Troubleshooting Exam 2	Individual troubleshooting of an aircraft system		

## 7. SUMMATIVE EVALUATION PROCEDURES

### Course of the theoretical part of the course

Deadline (date)	Description of the evaluation activity	Context of realization and mode of evaluation	Learning objective(s)	Evaluation criteria	Weight (%)
Week 4	<b>Quiz 1</b> Identification and analysis of basic electrical components and circuits. Determination of DC electrical circuit parameters.	<ul style="list-style-type: none"> <li>✓ Questionnaire provided in class at time of review.</li> <li>✓ Short or Developmental Questions.</li> <li>✓ no documentation</li> <li>✓ individual</li> </ul>	1, 2	<ul style="list-style-type: none"> <li>- Accuracy of calculations</li> <li>- Diagnostic accuracy</li> <li>- Accuracy of methodology applied</li> </ul>	Formative
Week 7	<b>Exam 1</b> Identification and analysis of basic electrical components and circuits. Determination of DC electrical circuit parameters.	<ul style="list-style-type: none"> <li>✓ Questionnaire provided in class at time of review.</li> <li>✓ Development questions dealing with scenarios.</li> <li>✓ no documentation</li> <li>✓ individual</li> </ul>	1, 2, 3	<ul style="list-style-type: none"> <li>- Accuracy of calculations</li> <li>- Diagnostic accuracy</li> <li>- Accuracy of methodology applied</li> </ul>	15
Week 8	<b>Delivery of Battery Research Report</b>	Definitions of search terms provided and explained in course 6	3	<ul style="list-style-type: none"> <li>- Correct characterization of batteries</li> <li>- Correct explanation of maintenance requirements</li> <li>- Precise explanation of handling and storage requirements</li> </ul>	5



**Course outline 280-3D4-EM Direct Current Avionics Systems**

Week 12	<b>Quiz 2</b> Electrical circuit analysis and simulation. Determination of DC electrical circuit parameters.	<ul style="list-style-type: none"> <li>✓ Questionnaire provided in class at time of review.</li> <li>✓ Short or Developmental Questions.</li> <li>✓ no documentation</li> <li>✓ individual</li> </ul>	1, 2, 3	<ul style="list-style-type: none"> <li>- Accuracy of calculations</li> <li>- Diagnostic accuracy</li> <li>- Accuracy of methodology applied</li> </ul>	Formative
Week 15	<b>Exam 2</b> Theoretical analysis, verification and troubleshooting of aircraft electrical systems. Determination of DC electrical circuit parameters.	<ul style="list-style-type: none"> <li>✓ Questionnaire provided in class at time of review.</li> <li>✓ Development questions dealing with scenarios.</li> <li>✓ no documentation</li> <li>✓ individual</li> </ul>	1, 2, 3, 4	<ul style="list-style-type: none"> <li>- Accuracy of calculations</li> <li>- Diagnostic accuracy</li> <li>- Accuracy of methodology applied</li> </ul>	40

Subtotal: 60%.

**Conduct of the practical part of the course**

Deadline (date)	Description of the evaluation activity	Context of realization and mode of evaluation	Learning objective(s)	Evaluation criteria	Weight (%)
Week 5	<b>Practical assessment 1</b> Analysis, verification and troubleshooting of DC primary generation aircraft equipped with DC generators	<ul style="list-style-type: none"> <li>✓ Individual evaluation on didactic panel</li> <li>✓ Electrical circuit to be made according to a drawing provided</li> <li>✓ Perform electrical measurements according to the provided evaluation workbook</li> </ul>	1, 2	<ul style="list-style-type: none"> <li>- Appropriate use of technical information</li> <li>- Compliance of technical verification operations</li> <li>- Circuit accuracy</li> <li>- Compliance of technical operations when taking measurements</li> </ul>	5
Week 10	<b>Troubleshooting Exam 1</b> Analysis, verification and troubleshooting of DC primary generation aircraft equipped with DC generators	<ul style="list-style-type: none"> <li>✓ Individual evaluation on didactic panel</li> <li>✓ Verification and Troubleshooting</li> <li>✓ 1 malfunction placed by the teacher for evaluation purposes</li> <li>✓ List of tests to be performed provided in class</li> <li>✓ Perform tests according to a procedure provided, in order to validate the compliance of the unit</li> </ul>	1, 2, 3, 4	<ul style="list-style-type: none"> <li>- Appropriate use of technical information</li> <li>- Compliance of technical verification operations</li> <li>- Precise description of the observed anomaly</li> <li>- Accurate assessment of symptoms</li> <li>- Precise identification of probable causes</li> <li>- Judicious planning</li> <li>- Compliance of technical operations when taking measurements</li> <li>- Precise identification of the cause of the anomaly</li> <li>- Clarity of troubleshooting conclusion</li> </ul>	10

Week 15	<p><b>Troubleshooting Exam 2</b> Analysis, verification and troubleshooting of DC primary generation aircraft equipped with DC generators</p>	<ul style="list-style-type: none"> <li>✓ Individual evaluation on didactic panel</li> <li>✓ Verification and Troubleshooting</li> <li>✓ 1 malfunction placed by the teacher for evaluation purposes</li> <li>✓ List of tests to be performed provided in class</li> <li>✓ Perform tests according to a procedure provided, in order to validate the compliance of the unit</li> </ul>	1, 2, 3, 4	<ul style="list-style-type: none"> <li>- Appropriate use of technical information</li> <li>- Compliance of technical verification operations</li> <li>- Precise description of the observed anomaly</li> <li>- Accurate assessment of symptoms</li> <li>- Precise identification of probable causes</li> <li>- Judicious planning</li> <li>- Compliance of technical operations when taking measurements</li> <li>- Precise identification of the cause of the anomaly</li> <li>- Clarity of troubleshooting conclusion</li> </ul>	25
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Subtotal : 40%

TOTAL : 100%

### Extracurricular activities of an aeronautical nature.

In order to increase their knowledge of the aviation environment, the Avionics Department strongly advises students to actively participate in the development of and take part in any extracurricular activities of an aeronautical nature such as visits (industries, operators, airports, air traffic management, military bases, museums, theme parks, etc.), conferences or events organized both within and outside the National School of Aeronautics.

## 8. MANDATORY EQUIPMENT REQUIRED

Safety clothing and equipment in accordance with ÉNA standards.

EISMIN, THOMAS K. – *Aircraft Electricity & Electronics, \*7th Edition*, McGraw-Hill, 2019. ISBN 978-1-260-10821-7 (paper version strongly recommended)

## 9. BIBLIOGRAPHY

EISMIN, THOMAS K. – *Aircraft Electricity & Electronics, \*7th Edition*, McGraw-Hill, 2019. ISBN 978-1-260-10821-7

## 10. CONDITIONS FOR SUCCESS IN THE COURSE

### (1) Note of passage

The passing grade for a course is 60% (PIEA, section 5.1m).

### (2) Attendance at summative evaluations

Attendance at summative evaluation activities is mandatory (IEP, section 5.2.5.1).

### (3) Delivery of the work

Work required by a professor must be submitted on the date, place, and time specified. Penalties for tardiness are established according to departmental rules (PIEA, section 5.2.5.2).

Penalties for late work are: *Unless agreed upon with the instructor, late work is penalized at a rate of 10% per day late, and a grade of zero will be assigned to the work beginning on the sixth day late. Work required by week 15 may not be turned in late.*

See the "Departmental Rules" section at: <https://mareussite.cegepmontpetit.ca/ena/mon-parcours/mon-programme/regles-departementales/>

#### **(4) Material presentation of the work**

The student must respect the "Normes de présentation matérielle des travaux écrits" adopted by the Cégep. These standards are available at <http://rmsh.cegepmontpetit.ca/normes-de-presentation-materielle-des-travaux-ecrits-du-cegep/>.

Penalties for failure to meet standards are: *When an assignment turned in is deemed unacceptable due to presentation, grading of that assignment will be delayed until the assignment is turned in within the standards set by the instructor. In this case, the penalties for late submission of work will apply.*

See the "Departmental Rules" section at: <https://mareussite.cegepmontpetit.ca/ena/mon-parcours/mon-programme/regles-departementales/>

#### **(5) Quality of the French language**

The assessment of language quality (PIEA, section 5.3.1) must meet the criteria and values established by the department. The departmental procedure for evaluating the quality of French is:

<https://mareussite.cegepmontpetit.ca/ena/mon-parcours/mon-programme/regles-departementales/>

## **11. HOW TO PARTICIPATE IN THE COURSE**

### Laboratory Safety and Use of Premises:

Student occupancy of laboratory space and use of laboratory equipment must be under the supervision of a professor or technician, unless otherwise specified.

Any student whose behavior in the lab presents a risk to others present will, after warning by the instructor, be excluded from the lab until the case is reviewed by the instructor and the Avionics Department Coordinator.

**Safety glasses and shoes must be worn by all (faculty and students) for all lab sessions, whether the session is in the workshop, the hangars, or one of the school's technical libraries.**

Students are encouraged to consult the website for rules specific to this course:

<https://mareussite.cegepmontpetit.ca/ena/mon-parcours/mon-programme/regles-departementales/>

As stated in Section 5.3.4 of the PIEA, attendance is evidence of the student's commitment to his/her studies. The instructor must record absences in the electronic absence management system or on a logbook for the student to review.

## **12. INSTITUTIONAL POLICIES AND RULES**

All students enrolled at the École nationale d'aérotechnique of Cégep Édouard-Montpetit must be aware of the content of certain institutional policies and regulations and comply with them. These include the Institutional Policy on the Evaluation of Learning (PIEA), the Institutional Policy on the French Language (PILF), the Policy for a Harassment and Violence-Free Learning and Working Environment (PPMÉTEHV), the Conditions of Admission and Academic Progress, and the Procedure for Handling Student Complaints in the Context of Educational Relations.

The full text of these policies and regulations is available on the College's website at <http://www.cegepmontpetit.ca/ena/a-propos-de-l-ecole/reglements-et-politiques>. In the event of a discrepancy between the texts appearing elsewhere and the full text, the latter is the only legal and applied version.

**APPENDIX**

None.