



## Course outline

COURSE TITLE: **Hydraulic and pneumatic**

PROGRAM: 280.C0 Aircraft Maintenance



DISCIPLINE: 280-4B5-EM Hydraulic and pneumatic systems (power and control)

WEIGHTING: *Theory:* 2 *Practice:* 3 *Personal Study:* 2

Teacher(s)	Office	 extension	 e-mail
Jacques, Gabriel	C-183	2075	Gabriel.jacques@cegepmontpetit.ca

### Office hours

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Morning					
Afternoon					
Other					

Coordinator(s)	Office	 extension	 e-mail
Mora, Joaquin	C- 160	4220	<a href="mailto:joaquin.mora@ena.ca">joaquin.mora@ena.ca</a>
Dumas-Roy, Jeanne	C-160	4470	<a href="mailto:jeanne.dumasroy@ena.ca">jeanne.dumasroy@ena.ca</a>

## 1 CONTEXT OF THIS COURSE WITHIN THE PROGRAM

- This course is intended for 2nd year students enrolled in the Aircraft Maintenance Techniques program and is in the fourth session of this same program.
- The hydraulics and pneumatics course covers the operation, necessary maintenance and troubleshooting of aircraft hydraulic and pneumatic power systems.
- 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) according to Transport Canada requirements. The application of Transport Canada policies regarding absences is available on the [Student Guide](#) website under the heading « Information/AME and AML licences ».

## 2 COMPETENCIES OF THE EXIT PROFILE (STUDENT SKILL PROFILES)

- Carry out maintenance of aircraft systems

## 3 MINISTERIAL OBJECTIVE(S) AND COMPETENCIES

**025U** To check the operation (power and control components) of hydraulic and pneumatic systems

## 4 TERMINAL OBJECTIVE OF THE COURSE (FINAL COURSE OBJECTIVE)

- At the end of the course, the student will be able to diagnose the operation of the power and the control part of hydraulic and pneumatic systems.

## 5 TEACHING AND LEARNING STRATEGIES

- This course is divided into two distinct parts: a theoretical and practical part.
- The 2-hour theoretical portion of the course will focus on understanding the operation of components, diagrams and the different fluids used in aviation. This will be done through active participation in discussion groups and some masterful presentations. In addition, thanks to troubleshooting tables, the student will be able to isolate the probable causes of a failure or anomaly on different hydraulic and pneumatic systems.
- The practical portion of 3 hours will take place in the laboratory. The student will use, in teams, test benches (rotating every week) to demonstrate the operation of components and put them in the operational context of a system. Using a fault simulator or aircraft hydraulic systems, the student will troubleshoot a set of faults and propose a solution for each of them.

## 6 COURSE PLAN

### LEARNING OBJECTIVES

1. Collect information relating to the operation of the systems.
2. Perform aircraft system start-up.
3. Validate the state of the systems and examine their operation according to the manufacturer's specifications and the pre-established parameters.
4. Diagnose problems.
5. Transmit information.

### 6.1 THEORETICAL PORTION

SEM	LEARNING OBJECTIVE NUMBER	CONTENTS	OPERATING MODE AND LEARNING ACTIVITIES	RESOURCES, DOCUMENTS, TECHNOLOGY TOOLS AND URL LINKS
1	1 and 5	<ul style="list-style-type: none"> <li>– Presentation of the course outline;</li> <li>– Pascal's law;</li> <li>– Introduction to the symbols of the SAE AS1290 standard;</li> <li>– Single hydraulic circuit manually activated</li> </ul>	<ul style="list-style-type: none"> <li>– Masterful presentation;</li> <li>– Thoughts on how a car jack works.</li> </ul>	<ul style="list-style-type: none"> <li>– Notebooks/course documents ;</li> <li>– SAE AS1290 standard.</li> </ul>
2	1, 3 and 5	<ul style="list-style-type: none"> <li>– Deepening of the simple hydraulic circuit in aeronautical applications;</li> <li>– Master cylinder and its sub-components;</li> <li>– Application of single-acting cylinders in aviation;</li> </ul>	<ul style="list-style-type: none"> <li>– Introduction of the summary table of components;</li> <li>– Masterful presentation;</li> <li>– Group reflection;</li> <li>– Simple aircraft brake circuit diagram design in hydraulic symbols .</li> </ul>	<ul style="list-style-type: none"> <li>– Notebooks/course documents ;</li> <li>– Standard SAE AS1290 ;</li> <li>– Summary table of components ;</li> <li>– Technical documentation.</li> </ul>
3 and 4	1, 3 and 5	<ul style="list-style-type: none"> <li>– The components of a hydraulic system.</li> </ul>	<ul style="list-style-type: none"> <li>– Masterful presentation;</li> <li>– Team research;</li> <li>– Oral presentations.</li> </ul>	<ul style="list-style-type: none"> <li>– Course notebooks/documents;</li> <li>– Summary table of components;</li> <li>– Aviation Maintenance-Technician Handbook Airframe vol. 2;</li> <li>– SAE AS1290 standard.</li> </ul>
5	1, 3 and 5	<ul style="list-style-type: none"> <li>– Familiarization with the Transport Canada website and the ÉNA technical library;</li> <li>– Deepening the simple hydraulic circuit in aeronautical applications.</li> </ul>	<ul style="list-style-type: none"> <li>– Masterful presentation;</li> <li>– Research exercises.</li> <li>– Masterful presentation;</li> <li>– Group discussion;</li> <li>– Simple aircraft brake circuit diagram design in hydraulic symbols.</li> </ul>	<ul style="list-style-type: none"> <li>– “Research on the TC site and technical publications” coursebooks/documents;</li> <li>– SAE AS1290 standard;</li> <li>– ÉNA technical library.</li> </ul>

S.E.M.	LEARNING OBJECTIVE NUMBER	CONTENT	OPERATING MODE AND LEARNING ACTIVITIES	RESOURCES, DOCUMENTS, TECHNOLOGY TOOLS AND URL LINKS
6	1, 3 and 5	<ul style="list-style-type: none"> <li>– Interpretation of technical documentation and diagramming of a system.</li> </ul>	<ul style="list-style-type: none"> <li>– Understanding and drawing the assisted flight control system of a helicopter</li> <li>– Updated summary table.</li> </ul>	<ul style="list-style-type: none"> <li>– Course notebooks/documents;</li> <li>– SAE AS1290 standard;</li> <li>– ÉNA technical library;</li> <li>– Summary table of components.</li> </ul>
7	1, 3 and 5	<ul style="list-style-type: none"> <li>– <b>Exam no. 1</b> on the concepts of weeks 1 to 7.</li> </ul>	<ul style="list-style-type: none"> <li>– Multiple choice and/or short development exam, with notes.</li> </ul>	<ul style="list-style-type: none"> <li>– Course notebooks/documents;</li> <li>– SAE AS1290 standard;</li> <li>– ÉNA technical library.</li> </ul>
8	1, 3 and 5	<ul style="list-style-type: none"> <li>– Return to exam no. 1;</li> <li>– Drawing a diagram using PowerPoint.</li> </ul>	<ul style="list-style-type: none"> <li>– Masterful presentation;</li> <li>– Design of the lifting jack diagram using PowerPoint.</li> <li>– Updated summary table.</li> </ul>	<ul style="list-style-type: none"> <li>– Course notebooks/documents;</li> <li>– Microsoft PowerPoint;</li> <li>– ÉNA technical library;</li> <li>– SAE AS1290 standard.</li> </ul>
9	1 and 5	<ul style="list-style-type: none"> <li>– Presentation of the draft diagram.</li> </ul>	<ul style="list-style-type: none"> <li>– Masterful presentation;</li> <li>– Team work on the draft diagram;</li> <li>– Individualized support through teaching.</li> </ul>	<ul style="list-style-type: none"> <li>– Course notebooks/documents;</li> <li>– Microsoft PowerPoint;</li> <li>– SAE AS1290 standard;</li> <li>– ÉNA technical library.</li> </ul>
10	1, 3 and 5	<ul style="list-style-type: none"> <li>– Draft diagram.</li> </ul>	<ul style="list-style-type: none"> <li>– Team work on the mid-term project (identification of AS190C components and their symbols)</li> <li>– Individualized support through teaching.</li> </ul>	
11	1, 3 and 5	<ul style="list-style-type: none"> <li>– Draft schematic</li> </ul>	<ul style="list-style-type: none"> <li>– Team work on the mid-term project (identification of AS190C components and their symbols)</li> <li>– Individualized support through teaching.</li> </ul>	

S.E.M.	LEARNING OBJECTIVE NUMBER	CONTENT	<u>OPERATING MODE</u> AND LEARNING ACTIVITIES	RESOURCES, DOCUMENTS, TECHNOLOGY TOOLS AND URL LINKS
12 and 13	1, 4 and 5	<ul style="list-style-type: none"> <li>- Introduction to troubleshooting:               <ul style="list-style-type: none"> <li>o Why :                   <ul style="list-style-type: none"> <li>▪ Operation vs Inspection</li> </ul> </li> <li>o How :                   <ul style="list-style-type: none"> <li>▪ Hydraulic fundamentals</li> <li>▪ Methodology</li> <li>▪ Data acquisition</li> <li>▪ Technical documentation</li> <li>▪ Testing the hypothesis</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Masterful presentation;</li> <li>- Group reflection;</li> <li>- Research into possible system/component failures;</li> <li>- Organization of the process.</li> </ul>	<ul style="list-style-type: none"> <li>- Course notebooks/documents;</li> <li>- SAE AS1290 standard;</li> <li>- ÉNA technical library.</li> </ul>
14	1, 4 and 5	<ul style="list-style-type: none"> <li>- Review for final exam</li> </ul>	<ul style="list-style-type: none"> <li>- Masterful presentation;</li> <li>- Final exam practice.</li> </ul>	<ul style="list-style-type: none"> <li>- Course notebooks/documents;</li> <li>- SAE AS1290 standard;</li> <li>- ÉNA technical library.</li> </ul>
15	1, 4 and 5	<ul style="list-style-type: none"> <li>- Final exam</li> </ul>	<ul style="list-style-type: none"> <li>- Multiple choice and/or short development exam, with notes</li> </ul>	<ul style="list-style-type: none"> <li>- Course notebooks/documents;</li> <li>- SAE AS1290 standard;</li> <li>- ÉNA technical library.</li> </ul>

## 6.2 LABORATORY PART

SEM	LEARNING OBJECTIVE NUMBER	CONTENTS	OPERATING MODE AND LEARNING ACTIVITIES	RESOURCES, DOCUMENTS, TECHNOLOGY TOOLS AND URL LINKS
1	1, 2, 3 and 5	<ul style="list-style-type: none"> <li>- Course outline</li> <li>- Health and security</li> <li>- Technical writing/initiation to test benches.</li> </ul>	<ul style="list-style-type: none"> <li>- Masterful presentation;</li> <li>- Health and safety activity;</li> <li>- Amatrol test benches.</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>- Amatrol test benches;</li> <li>- New employee document;</li> <li>- Technical documentation ;</li> <li>- Dynamic questionnaire;</li> <li>- Course books.</li> <li>-</li> </ul>
2	1, 2, 3 and 5	<ul style="list-style-type: none"> <li>- Distinction between flow and pressure</li> </ul>	<ul style="list-style-type: none"> <li>- Masterful presentation;</li> <li>- Realization of assemblies on Amatrol test benches;</li> <li>- Group reflection.</li> </ul>	<ul style="list-style-type: none"> <li>- Note book ;</li> <li>- Amatrol test benches;</li> <li>- Technical documentation ;</li> <li>- Dynamic questionnaire;</li> <li>- New employee document.</li> </ul>
3	1, 2, 3 and 5	<ul style="list-style-type: none"> <li>- Incoming and outgoing flow</li> </ul>	<ul style="list-style-type: none"> <li>- Masterful presentation;</li> <li>- Realization of an assembly on the Amatrol test benches;</li> <li>- Group reflection.</li> </ul>	<ul style="list-style-type: none"> <li>- Amatrol test bench;</li> <li>- New employee document;</li> <li>- Technical documentation ;</li> <li>- Dynamic questionnaire;</li> <li>- Course books.</li> </ul>
4	1, 2, 3 and 5	<ul style="list-style-type: none"> <li>- Hydraulic motors</li> </ul>	<ul style="list-style-type: none"> <li>- Realization of assemblies on Amatrol test benches;</li> <li>- Masterful presentation;</li> <li>- Group reflection.</li> </ul>	<ul style="list-style-type: none"> <li>- Amatrol test bench;</li> <li>- New employee document;</li> <li>- Technical documentation ;</li> <li>- Dynamic questionnaire;</li> <li>- Course books.</li> </ul>
5	1, 2, 3 and 5	<ul style="list-style-type: none"> <li>- Accumulators</li> </ul>	<ul style="list-style-type: none"> <li>- Realization of assemblies on Amatrol test benches;</li> <li>- Masterful presentation;</li> <li>- Group reflection .</li> </ul>	<ul style="list-style-type: none"> <li>- Amatrol test bench ;</li> <li>- New employee document;</li> <li>- Technical documentation ;</li> <li>- Dynamic questionnaire;</li> <li>- Course books.</li> </ul>

SEM	LEARNING OBJECTIVE NUMBER	CONTENTS	OPERATING MODE AND LEARNING ACTIVITIES	RESOURCES, DOCUMENTS, TECHNOLOGY TOOLS AND URL LINKS
6	1, 2, 3 and 5	<ul style="list-style-type: none"> <li>– Mechanical controls and electro-hydraulic valves</li> </ul>	<ul style="list-style-type: none"> <li>– Realization of assembly on Amatrol test benches;</li> <li>– Masterful presentation;</li> <li>– Group reflection.</li> </ul>	<ul style="list-style-type: none"> <li>– Amatrol test bench;</li> <li>– New employee document;</li> <li>– Technical documentation ;</li> <li>– Dynamic questionnaire;</li> <li>– Course books.</li> </ul>
7	1, 2, 3 and 5	<ul style="list-style-type: none"> <li>– <b>Evaluation</b> on laboratories from weeks 1 to 6</li> </ul>	<ul style="list-style-type: none"> <li>– Carry out an assembly on the Amatrol test benches from a diagram and check its operation.</li> </ul>	<ul style="list-style-type: none"> <li>– Amatrol test bench;</li> <li>– New employee document;</li> <li>– Technical documentation ;</li> <li>– Course books.</li> </ul>
8	1, 2, 3 and 5	<ul style="list-style-type: none"> <li>– Review on the exam</li> <li>– Mechanical controls and electro-hydraulic valves</li> </ul>	<ul style="list-style-type: none"> <li>– Realization of assembly on Amatrol test benches;</li> <li>– Masterful presentation;</li> <li>– Group reflection</li> </ul>	<ul style="list-style-type: none"> <li>– Amatrol test bench;</li> <li>– New employee document;</li> <li>– Technical documentation ;</li> <li>– Dynamic questionnaire;</li> <li>– Course books.</li> </ul>
9	1, 2, 3 and 5	<ul style="list-style-type: none"> <li>– Sequence controls (electrically activated)</li> </ul>	<ul style="list-style-type: none"> <li>– Realization and adjustment of an assembly on the Amatrol test bench</li> <li>– Masterful presentation;</li> <li>– Group reflection.</li> </ul>	<ul style="list-style-type: none"> <li>– Amatrol test bench;</li> <li>– course books;</li> <li>– Technical documentation;</li> <li>– New employee document.</li> </ul>
10	1, 2, 3 and 5	<ul style="list-style-type: none"> <li>– Introduction to the breakdown simulator</li> <li>– Commissioning and adjustment of the fault simulator</li> <li>Power unit</li> </ul>	<ul style="list-style-type: none"> <li>– Adjustment of an assembly and fault finding on fault simulators;</li> <li>– Masterful presentation.</li> </ul>	<ul style="list-style-type: none"> <li>– Fault simulator;</li> <li>– Course notebooks;</li> <li>– New employee document.</li> </ul>
11	1, 2, 3 and 5	<ul style="list-style-type: none"> <li>– Troubleshooting on fault simulators <ul style="list-style-type: none"> <li>○ Load overrun</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>– Adjustment of an assembly and fault finding on fault simulators;</li> <li>– Masterful presentation.</li> </ul>	<ul style="list-style-type: none"> <li>– Fault simulator;</li> <li>– Course notebooks;</li> <li>– New employee document.</li> </ul>
12	1, 2, 3 and 5	<ul style="list-style-type: none"> <li>– Troubleshooting on fault simulators <ul style="list-style-type: none"> <li>○ Compressive load</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>– Adjustment of an assembly and fault finding on fault simulators;</li> <li>– Masterful presentation.</li> </ul>	<ul style="list-style-type: none"> <li>– Fault simulator;</li> <li>– Course notebooks;</li> <li>– New employee document.</li> </ul>

SEM	LEARNING OBJECTIVE NUMBER	CONTENTS	OPERATING MODE AND LEARNING ACTIVITIES	RESOURCES, DOCUMENTS, TECHNOLOGY TOOLS AND URL LINKS
13	1, 2, 3 and 5	<ul style="list-style-type: none"> <li>- Troubleshooting on fault simulators               <ul style="list-style-type: none"> <li>o Hydraulic motor</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Adjustment of an assembly and fault finding on fault simulators;</li> <li>- Masterful presentation.</li> </ul>	<ul style="list-style-type: none"> <li>- Fault simulator;</li> <li>- Course notebooks;</li> <li>- New employee document.</li> </ul>
14	1, 2, 3, 4 and 5	Final exam revision	<ul style="list-style-type: none"> <li>- Group exam practice.</li> </ul>	<ul style="list-style-type: none"> <li>- Fault simulator;</li> <li>- Course notebooks;</li> <li>- New employee document.</li> </ul>
15	1, 2, 3, 4 and 5	<ul style="list-style-type: none"> <li>- <b>Terminal evaluation</b> on laboratories from weeks 8 to 13</li> </ul>	<ul style="list-style-type: none"> <li>- Diagnosis of the hydraulic system of the fault simulator from a work order.</li> </ul>	<ul style="list-style-type: none"> <li>- Fault simulator;</li> <li>- course books;</li> <li>- Technical documentation ;</li> <li>- New employee document.</li> </ul>



## 7 SYNTHESIS OF SUMMATIVE EVALUATION METHODS

Method of evaluation and description of the activity	Realization context	Learning objective(s)	Evaluation criteria	Deadline (date)	Weighting (%)
Realization of an assembly using a hydraulic diagram and functional validation on test bench simulators	In the laboratory, individual	1, 2, 3 and 5	<ul style="list-style-type: none"> <li>– Accurate identification of information;</li> <li>– Ability to achieve expected results;</li> <li>– Understanding of a hydraulic diagram in symbols;</li> <li>– Safe use of test benches.</li> </ul>	Week 7	15%
Multiple choice exam and/or short development	In theory, individual	1, 3 and 5	<ul style="list-style-type: none"> <li>– Accurate retrieval of information;</li> <li>– Accurate description of the components;</li> <li>– Utility of components well defined;</li> <li>– Diagram of the system respecting the AS1290 graphic standard;</li> </ul>	Week 7	15%
Multiple choice exam and/or short development	In theory, individual	1, 3, 4 and 5	<ul style="list-style-type: none"> <li>– Clear organization of the troubleshooting process;</li> <li>– Precise definition of probable causes;</li> <li>– Accurate description of problems and solutions;</li> </ul>	Week 15	25%
<b>Terminal Evaluation</b> Troubleshooting on a fault simulator	In the laboratory, individual	1, 2, 3, 4 and 5	<ul style="list-style-type: none"> <li>– Accurate identification of information;</li> <li>– Safe use of the troubleshooting simulator;</li> <li>– Ability to identify the problem and propose a solution in a given time;</li> <li>– Technical writing done according to the new employee document;</li> <li>– Compliance with Cégep presentation standards.</li> </ul>	Week 15	45%
				<b>TOTAL</b>	<b>100%</b>

## 8 REQUIRED MATERIAL

The necessary documents will be provided on the Teams group of the course

Laptop. You can consult the information document which contains the minimum configuration and answers to frequently asked questions <https://www.cegepmontpetit.ca/ena/futurs-etudiants/programmes-d-etudes/maintenance-d-aeronefs#description>

## 9 BIBLIOGRAPHIE

- Amatrol, Inc. (2014). *Advanced Hydraulics Student Reference* (éd. 1e, v5.02). Jeffersonville, Indiana, États-Unis d'Amérique: Amatrol, Inc.
- Amatrol, Inc. (2021). *Basic Hydraulics (Virtual Trainer Enabled) Student Reference* (éd. 1e, v5.08000). Jeffersonville, Indiana, États-Unis d'Amérique: Amatrol, Inc.
- Amatrol, Inc. (2021). *Electro-Fluid Power Systems Student Reference* (éd. 1e, v6.00000). Jeffersonville, Indiana, États-Unis d'Amérique: Amatrol, Inc.
- Amatrol, Inc. (2021). *Instructor's Guide 85-AH Advanced Hydraulics Learning System* (éd. 1e, Rev. J). Jeffersonville, Indiana, États-Unis d'Amérique: Amatrol, Inc.
- Amatrol, Inc. (2021). *Instructor's Guide 85-BH Basic Hydraulics Learning System* (éd. 1e, Rev. E). Jeffersonville, Indiana, États-Unis d'Amérique: Amatrol, Inc.
- Amatrol, Inc. (2021). *Instructor's Guide 85-IH Intermediate Hydraulics Learning System* (éd. 1e, Rev. J). Jeffersonville, Indiana, États-Unis d'Amérique: Amatrol, Inc.
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- Instructor's Guide 85-EF Electro-Fluid Power Learning System* (éd. 1e, Rev. B). (2021). Jeffersonville, Indiana, États-Unis d'Amérique: Amatrol, Inc.
- Ministère de la Justice Canada. (2022, Décembre 21). *Ministère de la Justice Canada*. Consulté le Janvier 18, 2023, sur Site Web de la législation (Justice): <https://lois-laws.justice.gc.ca/PDF/SOR-96-433.pdf>
- Society of Automotive Engineering International. (2021). *AS1290C: (R) Graphic Symbols for Aircraft Hydraulic and Pneumatic Systems*. SAE International, SAE Aerospace Standard. Warrendale: SAE International.
- U.S. Department of Transportation. (2018). *Aviation Maintenance- Technician Handbook Airframe vol. 2*. FAA.

## 10 REQUIREMENTS TO PASS THE COURSE

### 1. Passing Mark

The passing mark for this course is 60% by adding the marks for the theory and practical work for the course.

### 2. Attendance for Summative Evaluations

Presence at exams is obligatory. Any absence from an evaluation activity which is not justified by a serious reason will mean a mark of zero and failure of this evaluation. According to article 5.2.5.1 of the *Institutional Policy on the Evaluation of Student Achievement* (IPESA). "it is the student's responsibility to take the necessary means to meet his teacher and explain the motives for his absence with a supporting document explaining his absence. If the motives are serious and recognized as such by the teacher, the teacher and the student will agree to the terms of the delay for doing the evaluation or assignment."

In addition, the IPESA indicates that "if a student is late for an evaluation activity with no justifiable reason, the teacher can refuse to allow the student to participate in the said activity. "

Serious reasons that can be considered are: illness (with a medical certificate), death of a family member (with a death certificate), a force majeure or overpowering event, activities authorized by the College, and legal reason (proof of the court summons).

### 3. Submitting Assignments

All assignments must be submitted by the date, time and place designated by the teacher (s). Unless there is an agreement with the teacher, late assignments are penalized by the deduction of 10% per day, and a mark of zero will be given when the assignment is six days late. Any assignments due in the fifteenth week cannot be submitted late.

### 4. Presentation of Written Work

The teacher (s) will provide students with information and guidelines regarding the presentation of written work. When the presentation of an assignment is judged unacceptable, the work will be penalized as a late assignment until an acceptable version is submitted. In this case, the penalties for late work will be applied.

Students must follow the standards adopted by the Cégep for written work (« *Normes de présentation matérielle des travaux écrits* »). These can be found at : <http://rmsh.cegepmontpetit.ca/normes-de-presentation-materielle-des-travaux-ecrits-du-cegep/>.

### 5. Plagiarism and other breaches of academic integrity

- a) Plagiarism consists of copying, translating, paraphrasing, in whole or in part, the work of another person and wrongfully attributing it to oneself, with or without their consent, and constitutes a breach of academic integrity.
- b) The use of works generated entirely or partially by artificial intelligence, if not authorized by the professor, is also considered a breach of academic integrity.
- c) Acts of fraud, such as impersonating another student during a summative assessment, deceiving, cheating, or falsifying documents or results, also constitute breaches of academic integrity.
- d) Any collaboration in such acts or any attempt to commit them is also considered a breach of intellectual ethics.

Any violation of intellectual honesty, as well as any attempt at or collaboration in such an action will result in a mark of "0" for the exam, the assignment or the evaluation activity in question. In this case, the teacher will make a written report to departmental coordination which will be transmitted to the Dean of Studies in accordance with article 5.6.1 IPESA.

## 11 METHODS OF COURSE PARTICIPATION

Accident prevention is the responsibility of each and every individual. We invite you to familiarize yourself with all health and safety measures at <https://mareussite.cegepmontpetit.ca/ena/mes-outils/sante-et-securite/>.

Bringing food or beverages into the laboratories is strictly prohibited.

Attire worn by students in laboratories and workshops must feature the ÉNA logo. The use of hooded sweatshirts with drawstrings is not permitted due to safety risks when using equipment or machinery. ÉNA-branded clothing is available for purchase at the ÉNA Coop (room C163-A).

Authorized pants include work pants or jeans without any decorations (nails, metal parts, etc.).

Personal Protective Equipment (PPE) is essential for the safety of students and is mandatory in laboratories, workshops, and hangars. This includes wearing safety footwear (boots or shoes) and safety glasses. Protective clothing such as lab coats or uniforms is only necessary when required.

## 12 OTHER DEPARTMENTAL REGULATIONS

Students are invited to consult the website for the specific rules for this course:  
<https://guideena-en.cegepmontpetit.ca/department-rules/>

## **13 INSTITUTIONAL POLICIES AND REGULATIONS**

Any student registered at Cégep Édouard-Montpetit must read the content of certain institutional policies and regulations and comply with them.

The French titles for these policies are: *Politique institutionnelle d'évaluation des apprentissages* (PIEA), la *Politique institutionnelle de la langue française* (PILF), la *Politique pour un milieu d'études et de travail exempt de harcèlement et de violence* (PPMÉTEHV), les *Conditions d'admission et cheminement scolaire*, la *Procédure concernant le traitement des plaintes étudiantes dans le cadre des relations pédagogiques*.

The full text of these policies and regulations is accessible on the Cégep web site at the following address: <http://www.cegepmontpetit.ca/ena/a-propos-de-l-ecole/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.

## **14 STUDENT ACCESSIBILITY CENTER - FOR STUDENTS WITH DISABILITIES**

Students having received a professional diagnosis of impairment (motor skills, neurological, organic, sensory, learning difficulties, mental health, autism spectrum disorder or other) or suffering from a temporary medical condition may request special accommodations.

Students seeking these accommodations must forward their diagnosis to the CSA by either MIO to "Service, CSA-ENA" or email to "servicesadaptesena@cegepmontpetit.ca".

Students already registered with the CSA must communicate with their teachers at the beginning of the semester to discuss those accommodations they have been awarded by the CSA.